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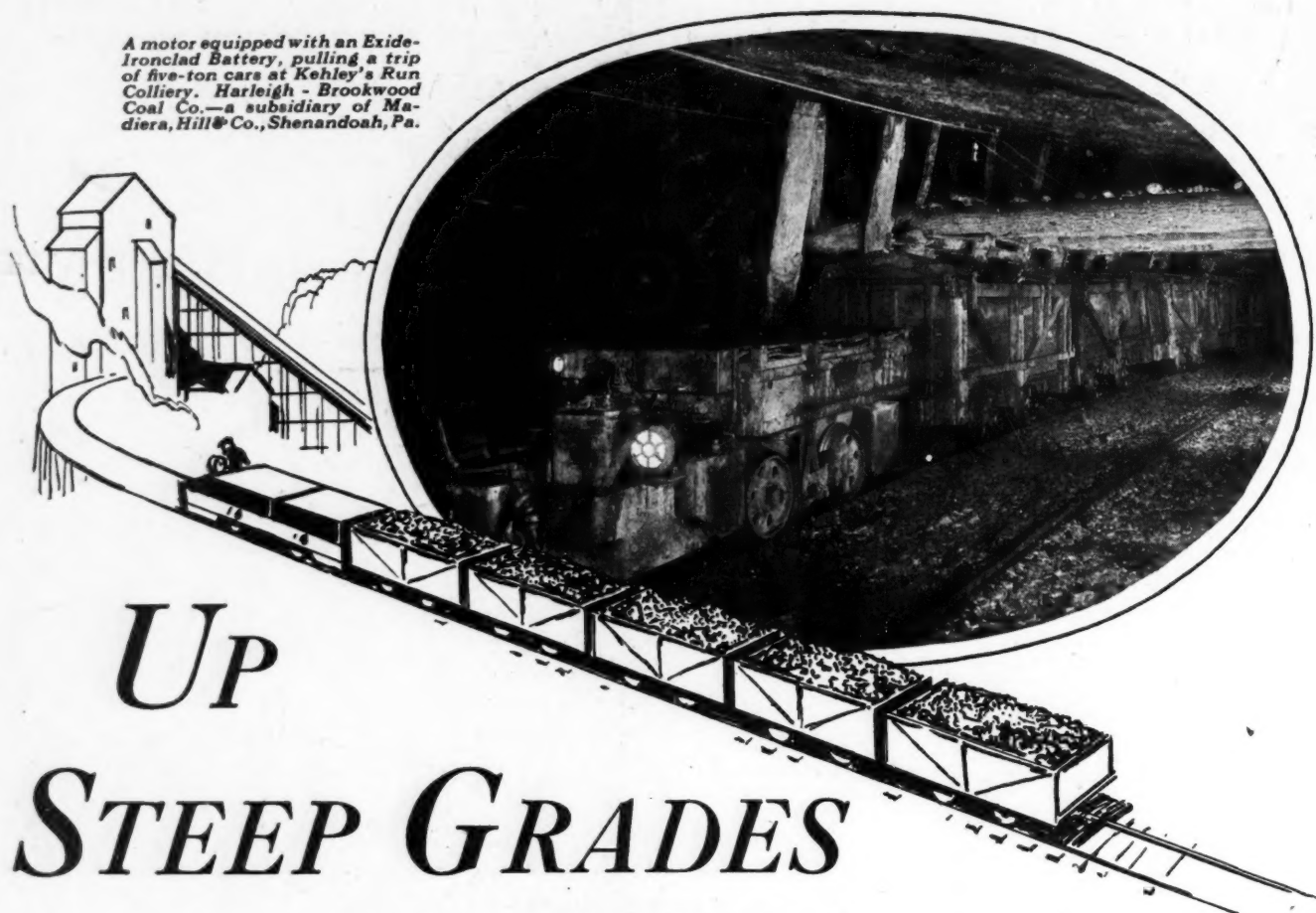
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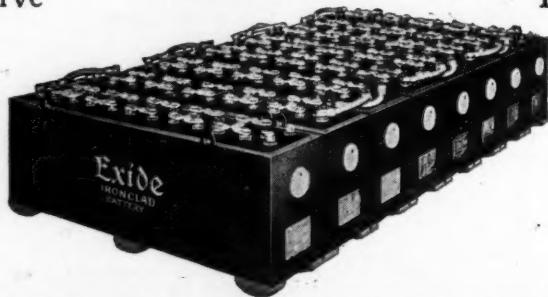
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With which is consolidated "The Colliery Engineer" and "Mines and Minerals"
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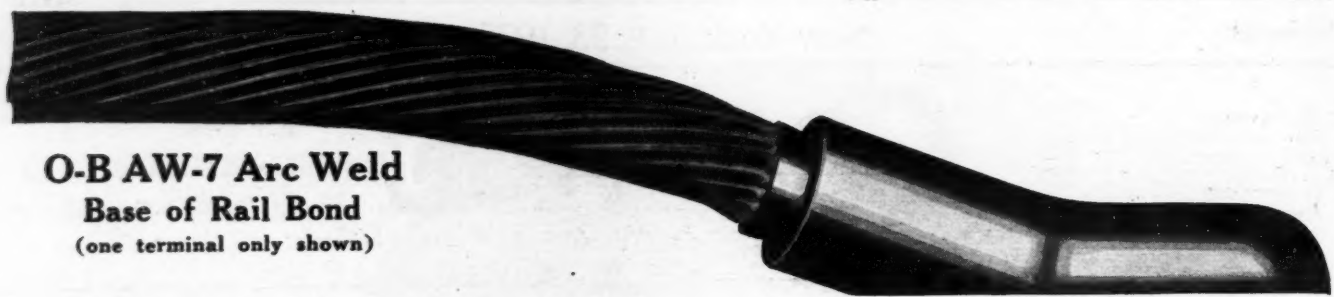
Water, Water, Everywhere

THE PUMPING of acidulous mine water always presents difficulties enough, but when the Shamokin Coal Co. reopened its Neilson colliery unusual problems were met. The mine shaft is over 1,200 ft. deep and it cuts through more than sixteen coal beds. Water filled the whole mine and stood at an elevation about 30 ft. below the ground level. There was no place to locate a pump. Next week, E. J. Gealy, associate editor of *Coal Age*, will tell how the mine is being unwatered.

MINE POWER PLANTS carry loads which must be served continually. The successful operation of the generators depends upon precautions and instruments which will be discussed by J. A. Erskine, of the Pittsburgh Terminal Coal Co. He will also explain just how poor power factor loads affect alternators which supply the electrical energy.

THE WAGE DIFFERENTIAL isn't the only reason why non-union mines will always be able to compete successfully with union mines. Some Kentucky and West Virginia mines are stealing a march on their union competitors and adopting new cost-reducing ideas. You will want to see, next week, just what features are being incorporated in the new mine of the Columbus Mining Co. at Allais, Ky.

KEENLY ALIVE to the fact that whatever decisions are made at Atlantic City important consequences will follow in the anthracite industry, *Coal Age* is keeping a constant eye upon the operators' and miners' conference. You will be kept in touch with all new developments.



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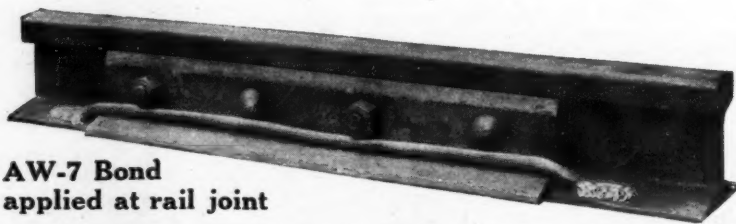
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COAL AGE

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Devoted to the Operating, Technical and Business
Problems of the Coal-Mining Industry

R. Dawson Hall
Engineering Editor

Volume 28

NEW YORK, JULY 23, 1925

Number 4

Insist on Arbitration

IN THEIR PRELIMINARY offer the anthracite operators have volunteered to accept arbitration. They have also agreed to work while the arbitral tribunal makes its award. These righteous decisions should be accompanied by a declaration in severalty that the operators will sell their coal at the present price with, however, all discounts lifted on Sept. 1, as has been customary practice in former years. The old-line operators and some of the independents mean to do so. Why not make the declaration now?

But for the public good the Government should also take action. It should call for prompt submission of the differences to arbitration by a board that would meet not later than Aug. 31, if the two parties have not previously come to an agreement. It should call on the mine workers meantime not to suspend operation, and it should draw attention to the fact that the operators have from the first decided that in so far as they are able they will not permit a suspension that would shorten the supply to the public or cost the people a single penny.

The practice of lashing the recalcitrant miners with no greater fierceness than the public spirited operators is unfair and produces the wrong attitude among those who most need rebuking. A ready political device it is to put operators and miners together sometimes dubbing them "the coal industry" and then to scold both for not resolving their difficulties, but the necessity of the public brooks no politics. Rather it requires a clear vision of what is right and what is wrong and a disposition to express the truth, the whole truth and nothing but the truth, and do it with courage and exactitude.

Now is the time to arrange arbitration before the public is demanding an immediate settlement. The miners want a delay. Give them no opportunity to bring the pressure of suspension on the public or the case will be won not by justice but by panic.

The administration wants to know why there has been no success in preventing the miners from upsetting matters every two years. There is reason enough. It is the Government's poor selling policy. It has condemned the very persons whose claims it believed just.

If the administration is hopeful of getting a settlement, of keeping wages from undue levels, of getting more undercutting machinery and conveyors into anthracite mines, of weeding out men who work only half a day, of laying off men who, by threat of a strike, are enabled to cling to jobs that do not help production or that only take one-half or less of a man's energy, the administration weakens its own case when it abuses miners and operators alike.

The word of the administration is the word of power. It should not be used lightly in condemnation. It should not be critical of the operators when it is getting all it wants from them, or the public will support the mine workers and run counter to the administration. That is poor publicity, stupid diplomacy, and will get the Government nowhere.

In all the editorials and reports of administration utterances that we have seen, nothing has been said as to the offer of arbitration made by the operators. There is a conspiracy of silence and even worse—one of misrepresentation apparently. Carter Field interviews Secretary of Labor Davis on July 17 and reports him as saying: "We shall attempt to bring all the pressure possible to bear on both sides to force them to permit mediation by government-appointed referees."

Of course that distinguished individual may have been misquoted or he may have spoken unguardedly, but certain it is that he should have been careful to correct the error and say that "The government will certainly attempt to bring the mine workers to accept the operators' offer of arbitration." Does the duty of supporting labor that apparently rests heavily on Mr. Davis' Department require him to misrepresent the situation by such a statement as that he is alleged to have made at Swampscott? Last week we had to record a similar misrepresentation. Amid all the jangles of miners and operators, the nation looks to Washington as to Olympus. When it fails, what hope remains for public enlightenment?

Keeping Cool with Coal

COAL MEN must not be content to wait for orders to come to them, nor spend all their time competing with one another. They must look to increasing the demand for coal and for the kinds of coal with which they find themselves glutted—namely the fine sizes. This research will bind coal men together and give them a common not a diverse aim. We believe there are opportunities to increase the tonnage marketed if coal men will back the development of indirect ways in which coal may be used. "Keeping cool with coal" is one of these. Does the public know to what extent the cooling art has progressed? Does it know how cooling may be effected?

A revelation of the advanced stage of this art would stimulate its growth. Investigation has shown that heating, ventilation and refrigeration engineers do not know themselves how rapidly the practice is growing. If they do not know it, the public doubtless is uninformed, and an opportunity is afforded for performing this publicity service. Everyone wants cooler conditions in summer. If the public learns how many have that advantage, and how they appreciate it, it will demand an extension of the practice. Here is a chance for constructive work.

The coal man will not get any orders for coal that are earmarked for refrigeration, but the larger orders of power companies consequent on the development will aid the industry nearly as greatly as if they came from the individuals who are seeking conditioned air. There is need, therefore, for a survey of air-conditioning activity and practice in all its phases—ventilation, air washing and refrigeration.

The bituminous coal industry waited too long for the automatic stoker. It did not do its part to promote

the introduction, and really, when the change came, it saved so much fuel that it was not wholly a blessing to the industry. The cooling program is on the other hand a marvelous possibility. It will add to the consumption of coal; it will make its draft on the small sizes; it will come at the time of the summer slump, and it will speed up industry so that there will be less let up in the hot-weather activity. Let the slogan, therefore, be, "Keep Cool with Coal." In this propaganda we can look for co-operation from the ventilation and refrigeration engineer, the manufacturer of refrigeration equipment, the power station, the builder and architect as it will assist them all. They will joyfully add their endeavors to those of the coal industry.

High Cost of Haggling

THE ONE-PRICE merchant has cut out haggling in the stores of America. The principle of "take it or leave it," which is delivered in a more diplomatic form as, "That is the marked price which no one has authority to change," has caused buyers to ask the marked price and buy almost without any further question. Unfortunately, it has become the practice to haggle about machinery and to have a varying rate for special designs not based directly on the additional service and the cost of the changes. So every man who has machinery to buy prepares to haggle like a slippered merchant in the alcoves of a Far Eastern market.

Manufacturers send representatives to camp sometimes for weeks on the trail of the man who has a large order. As the time consumed increases, the bidders still remain. They would not perhaps have tried to get the order if they had known it would cost them so dearly but to give up the quest is to lose what has been spent, so they stay on, still hoping, while the busy engineer, general manager or president is working and scheming in other directions with only casual interest in the salesman who sit in a sad row behind the railing in the outer office.

The high cost of merchandising is due partly to the expense of haggling. The standards of the manufacturer have not been high enough. He has not been ready enough to tag his goods. There has too often been a lower price that adroit bargaining and the play of one manufacturer against another would disclose and attain. A fair, fixed price that would give the buyer confidence, by saving selling costs, would enable the manufacturer who established his prices inflexibly to underbid his competitor and make the closing of contracts easy where now it is difficult. A clear exposition of the costs of changes in construction would eliminate a desire to change specifications which engineers too often evince.

In one instance recently \$15,000 was said to have been spent in saleswork and design for a piece of construction, the contract for which was ultimately placed for less than \$70,000. The engineers asked bids from several manufacturers all of whom prepared special designs. If the contract had been given in the first instance to the manufacturer whose equipment was of the most desirable type, and then if changes had been suggested and the cost of change had been added to the price all this loss would have been saved.

To ask for designs from persons whose product is not really being considered is in a sense dishonest, but it is the natural outcome of the haggling principle. Where price is not set absolutely, every sale must be

made by haggling. The manufacturers who consent to haggle, consent thereby to be haggled in turn. They can expect nothing else.

Shop-Worn Merchandise

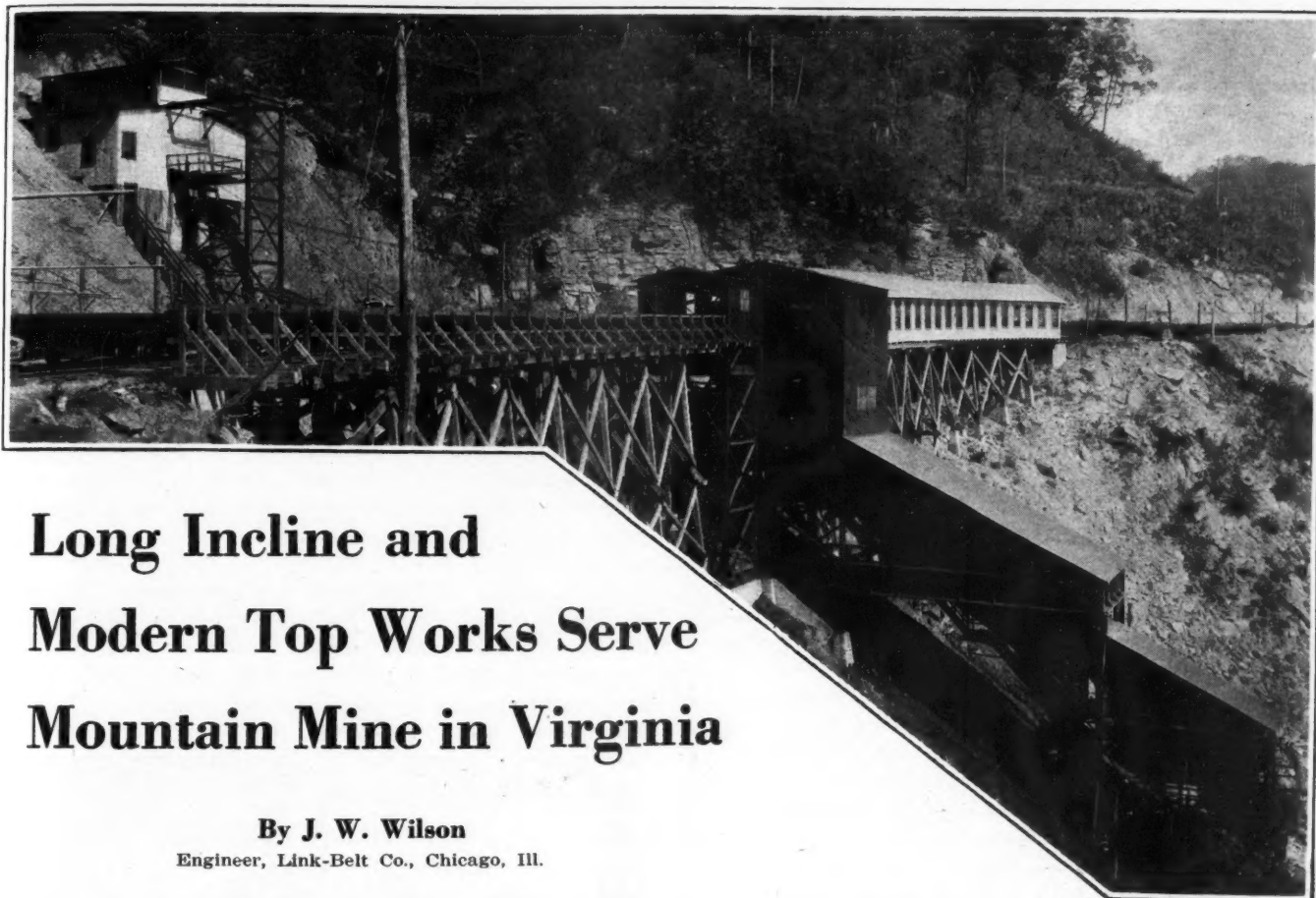
NOTHING SO DELIGHTS the average Thespian as good, old, moth-eaten, sure-fire "hokum." There is, as everyone who watches them in action will soon discover, considerable of the theatrical in the make-up of the common run of labor leaders. Economics and bloodless figures are not belittled in direct negotiations with the employers, but, when the labor leader is making a point for public consumption, popular appeal, rather than soundness, is the flavor he seeks to impart to his offering.

It is not surprising, therefore, that that sturdy veteran, "extortionate freight rates on anthracite," should have been trotted out by Vice-President Murray of the United Mine Workers at Atlantic City last week and paraded in all its ancient glory. The alleged unreasonableness of the transportation toll upon hard coal has been the favorite theme of individuals with special axes to grind for lo, these many years. Whether there is any basis in fact for this deep-seated belief—the fundamentalist creed of most critics of anthracite—we do not know.

What we do know is this: The Interstate Commerce Commission is the only body authorized by law to sit in judgment upon those rates. The miners, in their gesture for an appeal to Washington, concede the competency and thereby acknowledge, in public at least, a respect for the decisions of that federal tribunal. The Interstate Commerce Commission in 1915 passed upon the reasonableness of the base rates to tidewater after one of the most exhaustive investigations in its history. It examined the earnings and the operating costs of the anthracite carriers and pried into their then existing and past relations with the producing companies. Subsequently the Commission also passed upon rates to Middle Western key points such as Chicago and Detroit. Every change which has been made in the general rate structure since that time has been made in accordance with the orders of federal authority.

What, then, can the miners or the public hope from petitioning the Commission to institute another investigation? Mr. Murray says that his followers "have examined ultimate equities (whatever they may be!) and know that substantial cuts can be effected in freight rates of anthracite coal-carrying roads." If Mr. Murray and his associates "know" this, why was not the United Mine Workers represented at the hearings held under the 1923 investigation instituted by the Interstate Commerce Commission on recommendation of the United States Coal Commission? Why, when Governor Pinchot, likewise among the missing in those hearings, suggested that part of his gift to the miners could be assumed by the railroads, did not Mr. Murray and his associates rush before the Interstate Commerce Commission and demonstrate to that body that Gifford was a true prophet?

It is not surprising, we repeat, that the miners, who appear to have abandoned all pretense of justifying their demands for wage increases upon economic grounds, should resort to such "hokum." It is not surprising, but hardly flattering to the public. But, then, the union has never shown convincing evidence that it holds a high opinion either of the length of the public memory or of its intelligence.



Long Incline and Modern Top Works Serve Mountain Mine in Virginia

By J. W. Wilson

Engineer, Link-Belt Co., Chicago, Ill.

MANY ENGINEERING and construction problems were involved in building the outdoor plant of the Blue Diamond Virginia Coal Co.'s new mine near St. Charles, Va. Coal is taken from four openings high on the side of Little Black Mountain in the Pocket district of Lee County and is hauled various distances ranging up to one mile to reach a headhouse on the shoulder of the mountain. There it is emptied by a revolving dump into bins feeding 20-ton balanced monitors operating on a 3,600-ft. slope whose maximum grade is 58.9 per cent down the mountain to a well-equipped tipple nearly 1,000 ft. nearer to sea level. There is also an incline nearby for men and material. The plant is built to handle at least 3,000 tons a day.

The new camp and location is known as Diamond, Va. It is served by the Southern Ry. and the Louisville & Nashville R.R., which has operating rights over the Southern's line. The lease of the coal company lies partly in the State of Kentucky. The No. 10 coal vein in Black Mountain will average about 66 in. thick with a parting near the center about $\frac{1}{4}$ in. thick. A 6-in. slate vein above this bottom bench of coal separates it from 12 to 20 in. of coal above it and on top of which is found a solid sandstone ledge that, in places, will average 30 ft. thick. Only the lower bench of coal is being mined except in main haulways.

The preliminary development work has been laid out from the four openings on a room-and-pillar system of mining. The main haulage tracks are of 60-lb. steel, the gathering tracks 40 lb. and rooms 20 lb. on a 48-in.

gage. Solid body mine cars of about 3-ton capacity, with 12-in. surcharge, are used and are equipped with hand brakes.

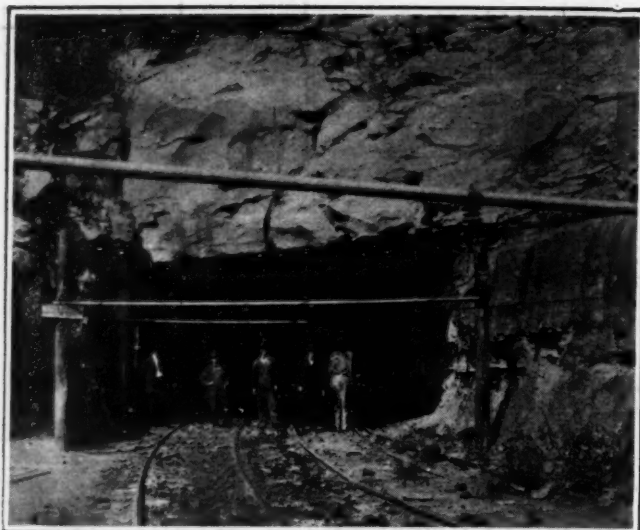
Electric power is purchased from a power company whose station is only three miles away and whose transmission lines to the Harlan coal field on the north side of Black Mountain cross over the mountain on the coal company's property. The high tension power is transformed to 440 volts for power service outside the mine and converted through two 200-kw., 275-volt rotary converters to direct current for mining machines and haulage motors. With full load on the converters and the hoist at a given time, the alternating current drop is less than 3 per cent and is seldom over $1\frac{1}{2}$ per cent under normal conditions. Because of the close proximity of the substation to the machine shop, semi-automatic control was decided upon.

Quite a number of departures from past practices have been incorporated in the equipment for the handling and preparation of this coal, some because of the peculiar conditions of topography and others due to the characteristics of the coal.

In the construction of the grade for the haulageway from the mine openings, a steam shovel was started up from the hollow in which the railroad is located at about elevation 1,600. It built a road ahead of itself about 12 ft. wide. The contour of the surroundings were such that $2\frac{1}{2}$ miles of this road had to be made to reach the headhouse location or elevation 2,594 at top of rail of the mine track at the rotary dump. Some of the grade on this roadway is as steep as 15 per cent. This steam shovel was then used to build the outside haulageway to the four openings, the longest of which was about a mile.

The first work was commenced on the material incline,

The headpiece shows the incline headhouse. Here a 2-car rotary dump empties trips from the mine through the weigh house into a 125-ton bin. An undercut gate feeds from the bin into 20-ton monitors operating in balance on the incline. The second bin at the extreme lower end of the headhouse is for overflow. It also is equipped to discharge over the incline track so that eventually monitors can be operated and loaded in tandem.

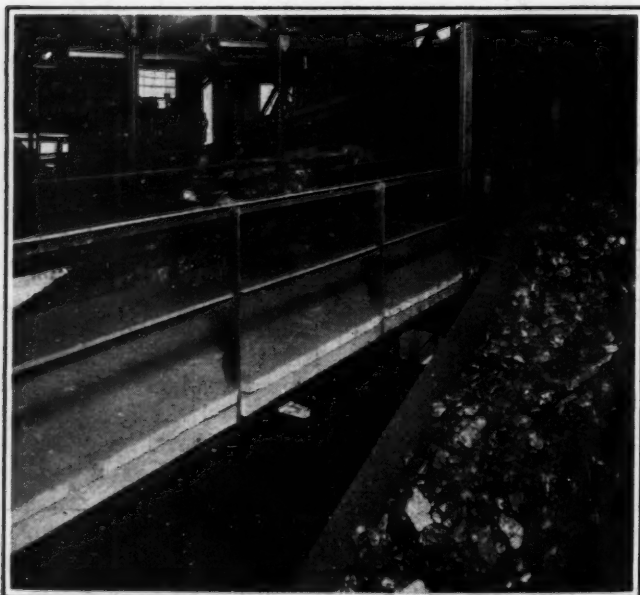


One of Four Openings at Blue Diamond Mine

At this point No. 1 butt main enters the coal. The strong roof that overlies the No. 10 seam in this part of the Black Mountain is to be seen over the portal. Coal is hauled down a 2½ per cent grade to a rotary dump in the headhouse. From there it descends the long incline in monitors to the tippie at the railroad.

which is about 300 ft. east of the dumphouse and coal incline. This material incline is about 4,000 ft. long, is built up the point of a ridge, and has seven humps in the track, which eliminated much blasting of rock and filling for the roadbed. Sixty-three pound rail on 48-in. gage was laid and a temporary wooden tippie was built at its lower end, where development coal was loaded into railroad cars with simple preparation over bar screens into two sizes, steam and block.

An ordinary steam hoist, using a ¾-in. wire rope, was used for material haulage during the construction of this incline. An electric hoist is now employed, driven by a 150-hp. motor, using a 1-in. wire rope. During the construction of the main coal haulageway, this incline handled an average of 300 tons per day, the hoist lowering four 3-ton cars per trip. This incline is also used to haul the men to the top. A special car was built to hold 44 men. Convenient loading stations and waiting houses are provided at the upper and lower



In the Blue Diamond Tippie

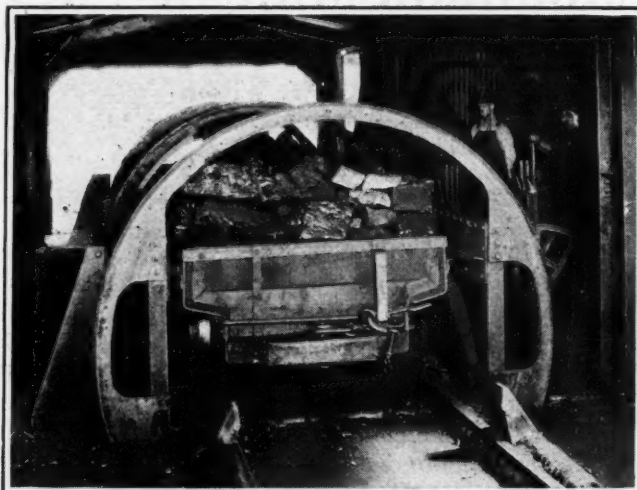
This view shows the interior of the preparation house looking from the egg-loading boom toward the control station. The shaker screens are in the right background.

ends. The hoist for this incline is set on solid rock at elevation 2,632.

Such good fortune did not occur in the hunt for a good foundation for the gravity incline machine on the main coal incline, which it was necessary to place in the hillside some distance above the headhouse.

The 150-hp. motor on this material hoist on the lowering part of the trip, pumps back considerable power into the alternating current line. During the construction period this reversal was so pronounced that the power company placed a ratchet on the meter to prevent it from registering a credit to the coal company. The 150-hp. motor is of the wound-rotor induction type, 440-volt and direct connected to the hoist drum by double reduction gears providing for two speeds. In low gear at 300 ft. per minute rope speed, it has a capacity of 12 tons, and at 600 ft. per minute in high speed, a capacity rating of 6 tons. The maximum grade on this man-and-material incline is 56 per cent, and the average grade approximately 40 per cent.

The control of this hoist motor consists of full automatic panels, seven contactors for the secondary, a forward and reverse switch in the primary, master controller, maximum torque switch, emergency switch and no-voltage and overload protection.



Two-Car Rotary Dump

This machine in the headhouse handles 400 tons an hour at the present maximum operating speed of the Blue Diamond mine. This capacity may be increased later.

To serve the main coal incline the loaded and empty mine cars in trips of about 30 cars each, are brought to and taken from the headhouse over double track having 2½ per cent grade in favor of the loads from the openings. A 2-car rotary mine car dump, power driven, dumps the contents of each car into separate, suspended-type, weigh boxes equipped with machines automatically recording the weights. For about 100 ft. above and below the rotary dump, the mine car tracks are on 3 per cent grade. The track through the rotary dump itself is level, and the arrangement has proven satisfactory in operation. Swivel couplings are used on the mine cars, so they are dumped in train, the spaced horns ahead of the dump, in the dump and below the dump eliminating tension that the tram grades would otherwise give.

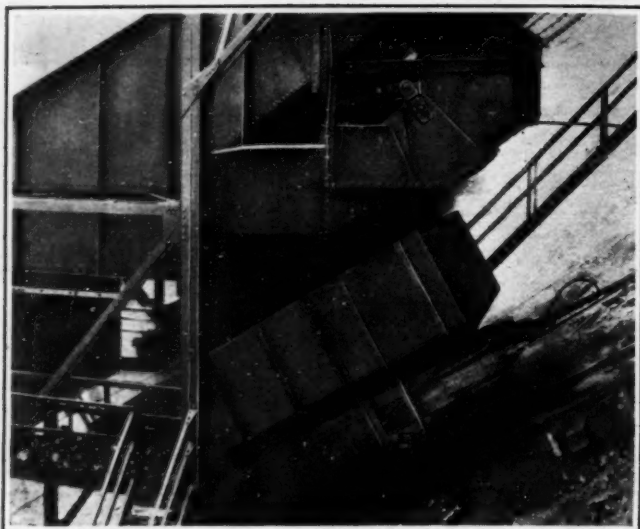
The two weigh boxes are equipped with gravity discharge gates closed with counterweights, and discharge directly into a 125-ton capacity bin above the monitor tracks. A secondary bin of 35-ton capacity, immediately beyond the large bin down the incline, is



The Blue Diamond Virginia Coal Co. Operates a Long Tramway at Its New Mine

Coal is hauled from four portals around the shoulder of Black Mountain to the headhouse seen near the top of the picture. There it is dumped into 20-ton monitors which lower it 994 ft. by the coal incline, the grades of which are

as steep as 59 per cent in places. The 4-track tippie over the railroad is equipped with shaker screens, rescreening equipment and steel pan loading booms capable of handling at least 3,000 tons of coal a day.



Monitor Loading on the Incline

The air-operated undercut gate is open, feeding coal from the 125-ton bin into the 20-ton drop-bottom car. Each of the two balanced monitors makes a round trip in 6 min. on the 3,800-ft. incline, lowering coal from the headhouse to the tippie, a vertical distance of 994 ft.

automatically filled through overflow from the 125-ton bin. Both bins are provided with two large air-operated gates, of the undercut type, for loading the monitors. This arrangement makes possible the loading of two monitors in tandem, each monitor holding 20 tons.

The distance from the headhouse to the shaker screens of the preparation plant below, is approximately 3,600 ft., and an average operating cycle of 6 min. was estimated. This was to provide for 400 tons per hour of ultimate capacity with two monitors loaded simultaneously at the headhouse bins, and brought down in tandem, each trip, therefore, carrying 40 tons of coal. At present, one monitor on each end of rope is used, and the operating cycle averages less than four minutes, recently 24 trips having been made in 58 min., elapsed time. Therefore, it may be some time before it will be necessary to use monitors in tandem.

The maximum grade on this coal incline is 58.9 per cent immediately underneath the headhouse loading

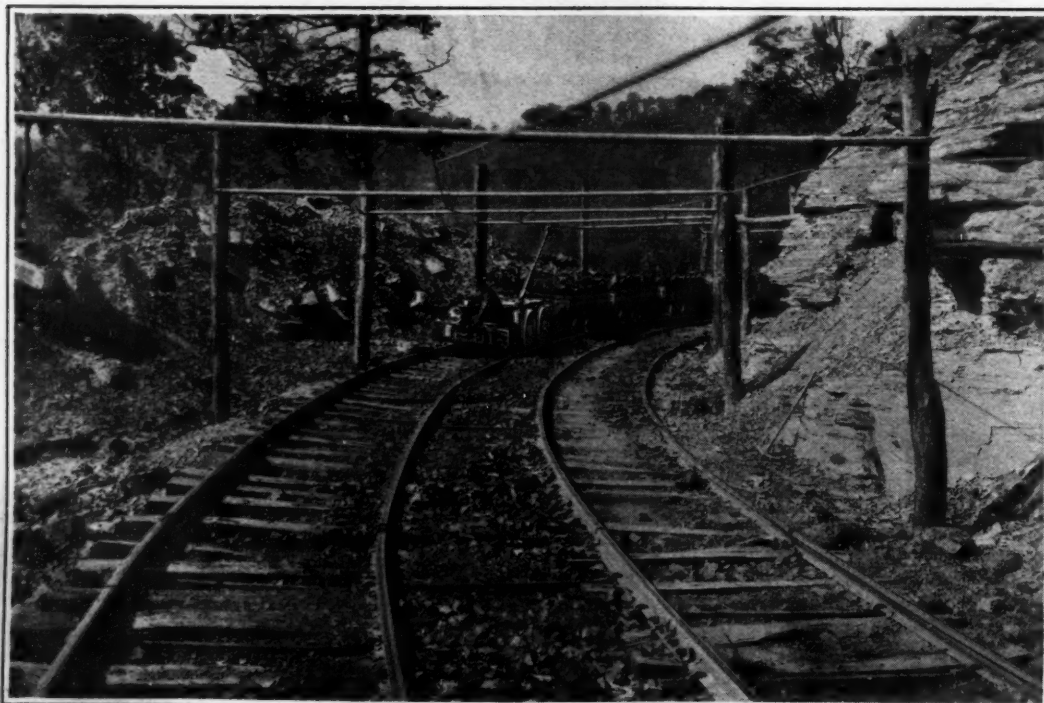
bins. One and one-quarter inch rope is used with the single monitors. The gravity machine drums are grooved for 1½-in. rope, which will be used ultimately in connection with the two monitors in tandem.

The coal monitors of the 4-wheel, rigid type, are 18 ft. long, 9 ft. wide and 9 ft. 6 in. high above rails. Three rails are used on the gravity plane from the headhouse to the turnouts at the middle, and below the turnouts three rails to within 50 ft. of the lower dump-house, where four rails are again used, spaced just rail clearances apart. Eighty-pound rail on 66-in. gage is used for this monitor runway with sawn wooden ties and track carefully stone-ballasted.

The gravity incline machine is of the 2-drum 4-brake type. Drums and brakes are 10 ft. in diameter, seven grooves in each drum, and brake bands 14 in. wide. Asbestos brake lining is used. The incline machine has a 150-hp. motor connected to drums through an expanding friction clutch to permit spotting of monitors if landing under loading bins is improperly made by operator, and also to permit rerailing of monitors in case of derailment on the incline. The motor haulage speed for this rerailing or spotting service, is 90 ft. per minute. The two brake bands on each drum are air-controlled, as well as the expanding clutch for motor connection. The valves for these controls, the motor controller and the valves for controlling the four undercut gates loading the monitors, are in the operator's station alongside the lower bin, where the operator can spot upcoming monitor and load it immediately after.

The rope from the monitor to the incline machine leads through a series of 96-in. diameter vertical and 48-in. diameter horizontal cast steel sheaves, and further protection is given the rope by installing flanged drums of 18-in. diameter and 24-in. face at the lower end of the bin structure.

The monitors discharge through drop-bottom doors into a 150-ton equalizing bin ahead of the shaker screens below. A steel pan conveyor automatically draws coal from this lower bin at the rate of 400 tons per hour, feeding the shaker screens, where sizing is made into 4-, 5- or 6x2-in. or 2½-in. egg coal, and 2-in. or 2½-in. screenings. The block and egg coal are rescreened



Substantial Haulage

On this main line from the workings, trips of 30 cars are hauled down a 2½ per cent grade to the incline headhouse. Sixty-three-pound steel is laid on solid roadbed. Rails on curves are cross-tied with 1-in. rods as shown in the foreground to withstand heavy side thrust.

before being placed on the steel pan conveyor-type picking tables, where any impurities may be taken out before the coal is loaded into railroad cars below by adjustable, steel, boom sections of these pan conveyors, which are lowered by electric hoists, operated by push-button control from the trimmers' walks below the picking floor and alongside the cars.

REFUSE EASILY DISPOSED

Any refuse found in the coal is thrown into a steel pan conveyor located underneath the picking tables and at right angles to them, providing the most convenient means for easy disposal of the refuse by the pickers. This conveyor discharges into a bin of about 1,400-cu.ft. capacity, which is emptied, as required, by wagon or truck.

At the end of the picking tables, another cross conveyor of the steel pan type, is used for taking either egg or lump coal from the raised-up ends of loading booms, and carrying it to a 100-ton capacity storage bin for house or town coal.

Four loading tracks are provided under the preparation structure, but only three are used at present. The fourth will be an additional lump track.

Each loading track is equipped with a car retarder. Tracks under the tippie are on 2½ per cent grade. The track scale and scale house are located immediately below the ladder of loading tracks.

Arrangement of Burners Raises Powdered Coal Efficiency

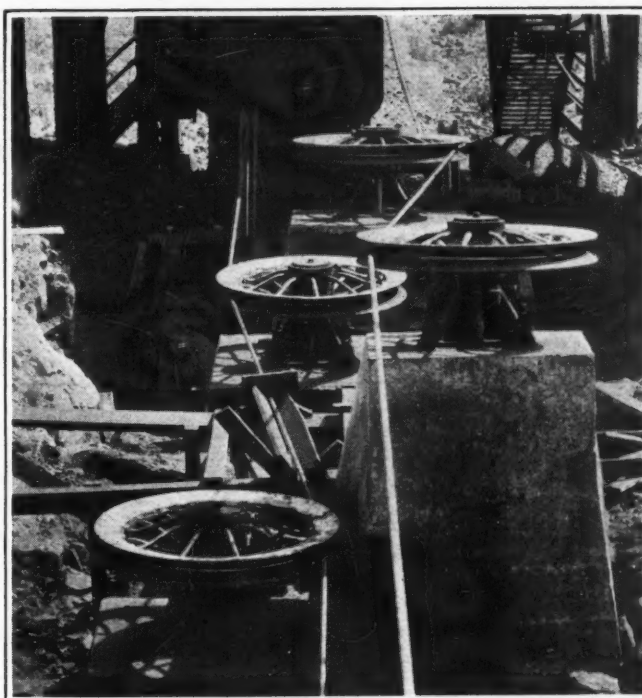
For some years it has been fairly well recognized that coal could be burned more efficiently in the powdered state than in any other. This is largely because when fired in this condition the draft control is more sensitive and accurate and, consequently, the admission of excess air can be reduced to a minimum. Efficiencies and boiler ratings unattainable, commercially, by other methods of firing are thus rendered possible.

Two chief problems were encountered in this method of coal firing. The first was that of obtaining quickly an intimate mixture of air and fuel so that combustion might proceed as rapidly as possible. The second was that of protecting the brickwork of the setting from rapid deterioration from the intense heat generated.

WHIRLING FLAME USED

Several years ago one of the engineers of the Fuller-Lehigh Co., conceived the idea that both of these objects could be gained by giving the flame a whirling motion similar to that of the cyclone. To get this revolving action of the flame, four jets were placed at right angles to each other within a well in the bottom of the furnace, the arrangement being such that each succeeding jet impinged upon and deflected the flame from the one preceding. By this means the furnace walls were protected from direct contact with the flame while simultaneously an extremely intimate mixture of the pulverized coal and air was obtained. The result was an intensely hot flame of short length.

Results of tests conducted on a commercial installation of this type in the Sherman Creek Station of the United Electric Light & Power Co., of New York City, show efficiencies from 3 to 5 per cent higher than those attained in other powdered-fuel installations in the



Rope-Centering Sheaves

This 6-wheel arrangement at the top of the Blue Diamond incline is laid out between the hoist and the plane. In this photograph, taken under the headhouse, a monitor is shown at the loading position.

same plant. Furthermore the curve of efficiencies obtained at various boiler ratings is much flatter than anything heretofore demonstrated.

In two other details the well-type of burner seems to possess a substantial advantage over other varieties. First, the combined volume of well and combustion space need be no greater than the combustion space of the ordinary stoker-fired boiler. Second, the rapid whirling motion of the flame seems to sweep away the so-called "dead film" surrounding the tubes, permitting an extremely rapid heat absorption by the boiler heating surface. This permits driving the boiler at exceptionally high ratings.

While it is perhaps too early, as yet, to foretell the future application of this type of furnace, all experience thus far gained would indicate that it would be well adapted to installation under boilers where automatic stokers have been installed originally. The small combustion space necessary would render it especially applicable to this use. It would also appear to be well fitted for boilers installed in plants where economy of space is an important consideration. While no experiments on its use in the burning of refuse fuels, such as bone and rash at the mines, have been reported, this furnace would appear to be as well adapted to this purpose as any of the other and better known designs.

Creosote Treatment for Dry-Rot in Wooden Mine Cars

The Hillman Coal & Coke Co., Pittsburgh, Pa., has experienced more or less trouble from dry-rotting of wooden mine cars which have been out of service for several months in idle mines. In an attempt to check this fungus growth within the wood of mine cars, this company is treating the latter with a creosote wood preservative. The effects of this treatment is being watched with interest.

Belt Rides on Wheels in New-Type Sectional Coal Face Conveyor

Drive Section May Be Inserted in Line at Any Point—Only Two Men Needed to Operate Machine at Face



By **Alphonse F. Brosky**
Assistant Editor, *Coal Age*,
Pittsburgh, Pa.

ANOTHER APPLICATION of rubber-fabric belting to coal-mine machinery has been made. This takes the form of a continuous, sectional belt conveyor intended for transporting coal from the working face to an entry where the cars of a trip may be loaded one after another without appreciable delay. The belt rides on wheels. This conveyor is said to be the first of its kind to be offered for use at the face in coal mines.

Like several all-metal conveyors of the same general type devised for underground use, the belt conveyor, as illustrated in Fig. 1, combines two end sections, a vertically-curved section, a drive section and a number of interchangeable straight sections. One or more of the latter can be added or removed, as required, to lengthen or shorten the unit. All sections are compact and comparatively light in weight affording ready portability.

In Fig. 2 are shown two sections of belt and a straight segment of the conveyor frame. Instead of moving over idlers like the ordinary conveyor belt, this one is carried by wheels turning on axles bolted at intervals to the belt sections. These wheels traverse rails that form a part of the conveyor frame. Each section of belt is 6 ft. long. The supporting axles are fastened to it on 3-ft. centers, so that only two sets of wheels are attached to any one section, one located in

the middle and the other at one end. In joining, of course, the sections are so mated as to maintain uniformity in the pitch of wheel centers.

The wheel axles are attached to the upper surface of the belt and thus serve as low flights, checking any backward movement of coal in slope positions such as the belt assumes while going over the discharge end of the conveyor. The wheel treads are slightly convex. Flanges on these wheels are unnecessary inasmuch as they are kept on the track by the guiding effect of the conveyor-frame sides.

Belt sections are joined together by an interlapping hinge arrangement. The hinge offsets contain $\frac{3}{4}$ -in. steel tubes which receive the hinge rod when this is put in place. The belt, which is 4-ply and reinforced on its carrying side, is wrapped around these hinge tubes and the overlaps vulcanized. The tubes are thus reinforced with rubber.

The conveyor frame is fabricated of 14-gage steel plate stiffened with angles and held together by means of cross braces and tie rods. Within and upon either side of the frame are an upper and a lower rail on which the belt wheels run. This is of standard 8-lb. section. The upper edges of the side plates are bent inward and downward forming skirt boards which cover the wheels and track and keep coal from dropping from the upper conveyor run to the lower. Although the belt is actually 20 in. wide, its effective width is cut down by the overhang of the skirt boards to 14 $\frac{1}{2}$ in.

Frame sections are 6 ft. long. They are joined together by bolts and nuts, or by a wedge key arrangement. The overall height and width are 20 $\frac{1}{2}$ in. and 29 $\frac{1}{2}$ in. respectively. With the exception of the drive section which, of necessity, must be somewhat heavier, each frame section weighs about 250 lb. Two men should have no difficulty in lifting one frame section and one man can easily handle two belt sections at one time.

The drive section, which also is 6 ft. long, can be inserted in the conveyor line at any point. For a 250- to 300-ft. conveyor with a capacity of 50 tons per hour at a belt speed of 100 ft. per minute, a 5-hp. motor drive will suffice. Power is transmitted from the motor through an angle-type of speed reducer to a driven shaft on which are mounted two sprockets, which in turn, actuate two conveyor haul chains. These are of steel roller, automotive-truck type and at intervals carry dogs which engage the conveyor wheels transmitting motion to the belt. The motor and speed reducer are mounted on a separate base which can be detached from the drive section proper while the conveyor is being moved to a new location.

Both head and tail sections are provided with a pulley

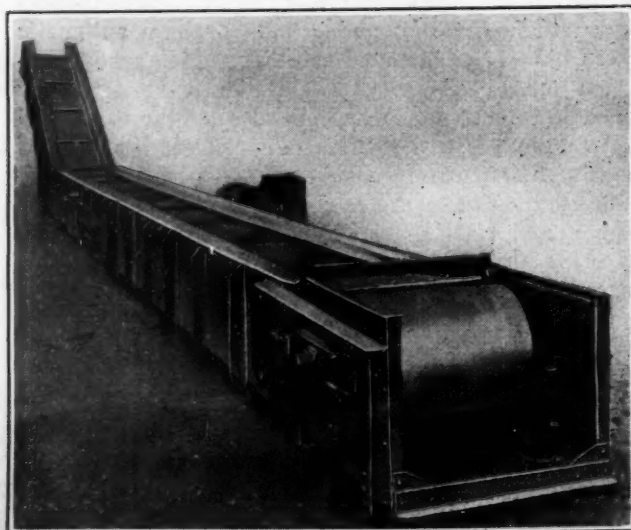


Fig. 1—General View of the Conveyor

A pair of the wheels that support the belt has just rounded the head pulley and is about to enter the guides between which movement to the discharge end is confined. The drive section may be seen near the middle of the conveyor.

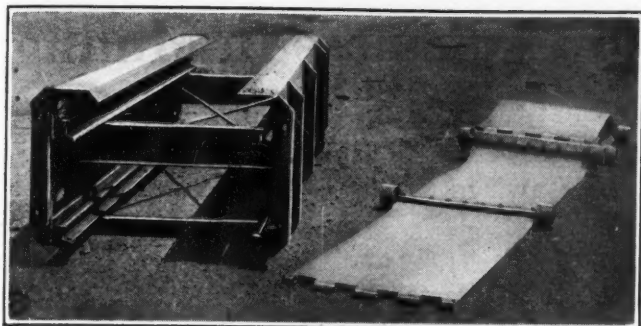


Fig. 2—Belt and Straight Frame Sections

Section after section of the belt may be joined together by merely passing rods through the holes in the interlocking hinge lugs. The wheels on the belt axles traverse the rails attached to the conveyor frame.

or drum which the belt rounds in passing from one run of its endless path to the other. Inasmuch as the conveyor is driven from the center, the head and tail pulleys are each provided with a screw take-up to insure uniform tension on each end of the drive. The discharge end can be elevated to a considerable height, being supported, as shown in the headpiece, from a single bent which it overhangs as a cantilever.

The design of this conveyor, known as the Thorsten, is such as to retain the major advantages of belt conveyors more permanently installed. Simultaneously it provides flexibility of the carrying agent—the belt—and simplicity of the other moving parts. It possesses other advantages, however, in addition to those of the ordinary belt. These accrue by reason of the fact that the sections of belt are linked together as one piece and supported by wheels which move with them. At only two points does the belt itself make contact with any part of the conveyor—at the head and tail pulleys. Elsewhere the wheels which support it receive the friction wear. They can be replaced quickly. Friction between the end pulleys and the belt is not relied upon to impart motion to the latter. Driving both the upper and lower runs of the conveyor simultaneously equalizes the pulling forces.

Because of these features of the design, the belt keeps in alignment with respect to the various sections of the conveyor frame even though these sections themselves may not be exactly level or in line. It is this characteristic that makes practicable this semi-rigid

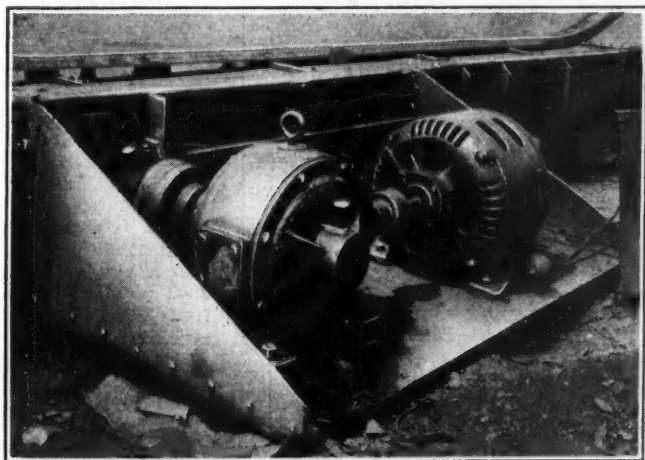


Fig. 3—Motor and Speed Reducer

These two machines are mounted on a common base plate which may be separated readily from the drive section proper, thus greatly facilitating handling and movement of the conveyor. The high rotational speed of the 5 hp. motor is so reduced as to impart a linear speed of 100 ft. per minute to the conveyor belt.

belt conveyor of the sectional and portable type for use in mines, where the floor is always more or less uneven.

When the drive section is located at the middle of the conveyor, the tension of the belt at any point is one-half that at the corresponding point on a friction pulley-driven conveyor of the same size, because of the double drive provided. Slippage and consequent wear on the belt are eliminated by the positive drive.

The simplicity of this conveyor is further demonstrated by the few bearings required. Only two wheel-bearings for every 3 ft. of belt length are needed, whereas a conveyor of the ordinary type requires two idler-pulley bearings for every foot of belt length on the carrying side of the conveyor.

The principles of this conveyor are covered by patents taken out under the name of T. Thorsten, mechanical engineer of the West Penn Power Co. and

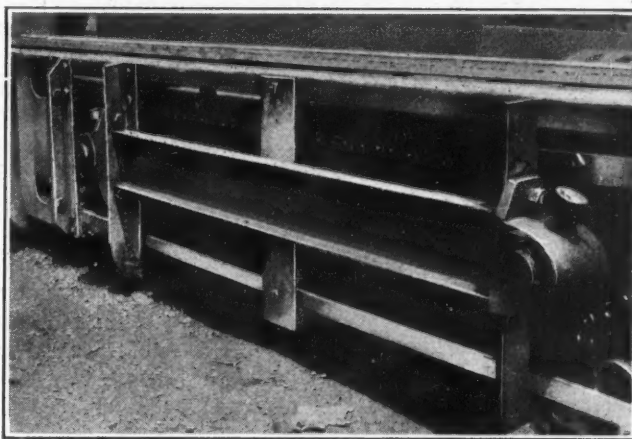


Fig. 4—Conveyor Drive Section

Dogs attached to the roller sprocket chain engage the wheels carrying the belt, thus driving the entire device. Inasmuch as both loaded and return strands are engaged and driven simultaneously, tension at any given point is at a minimum.

its subsidiaries, the Allegheny-Pittsburgh Coal Co. and the Windsor Power House Coal Co., all with offices in Pittsburgh, Pa. The conveyor itself will be manufactured by the Charleroi Iron Works, Charleroi, Pa.

Tests Mine Fire Hose and Water Pressure

A series of tests designed to ascertain the most suitable hydrant pressures and sizes of hose and nozzles for use in fighting mine fires has been completed by the U. S. Bureau of Mines, with the co-operation of the Illinois Geological Survey and the University of Illinois. The investigators found that the most effective combination of fire hose and water pressure for use by one man fighting a mine fire is that which gives a steam with maximum trajectory in a limited headroom and delivers the greatest volume of water.

The tests comprised stretching a line of 50 ft. of 1½-in. hose with different warps and bends and using hydrant pressures ranging from 30 lb. to 150 lb. per square inch. The nozzles were all cone-shaped and ranged from ⅞ to 1 in. in diameter. A few similar tests were made with 2½-in. hose.

The data obtained show that the ¾-in. nozzle apparently gives the most effective stream with 50 ft. of 1½-in. cotton rubber-lined hose.

The results of these tests are given in Technical Paper 330, by L. D. Tracy and R. W. Hendricks, copies of which may be obtained from the Bureau of Mines, Department of Commerce, Washington, D. C.

Eavenson Praises South for Advances in Mining

Tells Pittsburgh Coal Mining Institute West Virginia and Kentucky Surpass Pennsylvania—Talks of Financing Mines—Affelder "Lays Down the Law" in Safety Speech

By a Staff Correspondent

SOUTHERN coal producing companies generally, and those of West Virginia and Kentucky in particular, are leading Pennsylvania in adopting advanced ideas in the construction of mine plants and towns, and in the selection of equipment. The Southern operator is making a more earnest effort to inspire contentment among his workers by better living conditions and among his customers by better prepared coals, according to Howard N. Eavenson, consulting engineer of Pittsburgh, Pa. He talked on "Financing and Constructing a New Mine" at the third quarterly meeting of the Pittsburgh Coal Mining Institute, July 10. In the second address W. L. Affelder, assistant to the president of the Hillman Coal & Coke Co., declared stoutly that operators ought to be more active in the mine safety movement.

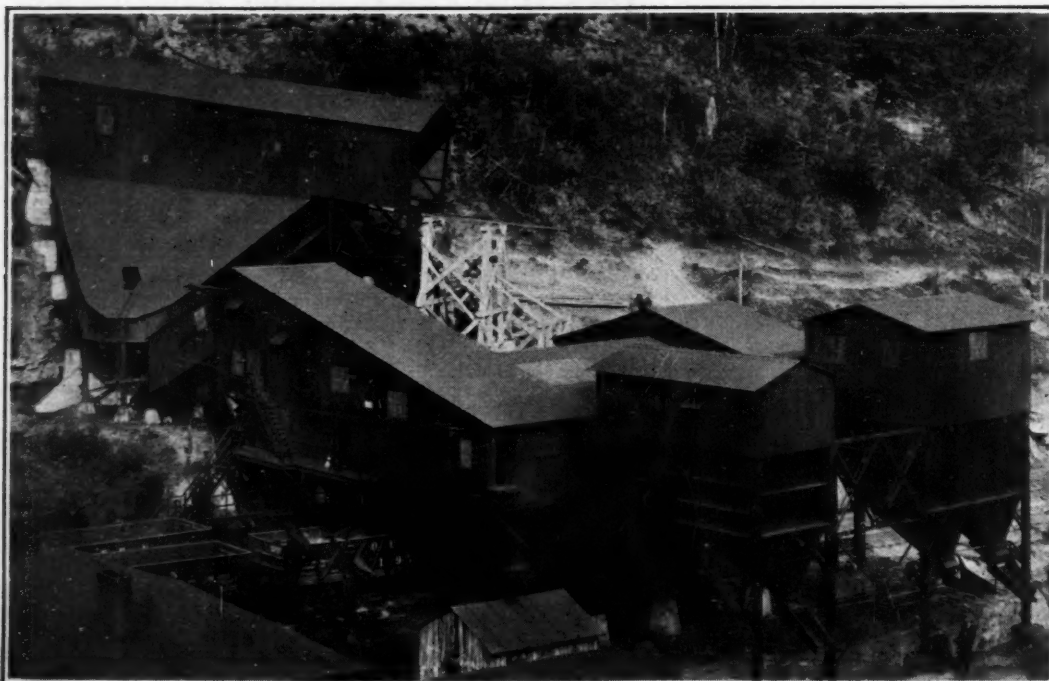
The Institute is advancing the educational work by which it intends covering all phases of coal mining in a series of talks by capable engineering and operating men. This was demonstrated by the July 10 meeting, which was held in the Chamber of Commerce auditorium, Pittsburgh, Pa., and was presided over by W. D. Parker, U. S. Bureau of Mines. Optimism rules the organization by reason of the fact that its membership has passed the thousand mark, a remarkable growth in nine months from its beginning. Unfortunately, this meeting was poorly attended—by about 50 men—because of the 90-deg. temperature and Pittsburgh's customary depressing humidity experienced at this time of the year.

The most important factor making for the success of a coal operation is its labor, Mr. Eavenson said in his talk. A contented miner is a safe and efficient

worker. In out-of-the-way localities the investment for the conveniences and comforts of life of the employee must be materially greater than that in more populous districts. It is not uncommon of owners in Southern fields to have invested in their towns the money equivalent of 60 to 100 per cent of the cost of the remainder of the property, making the housing investment 35 to 50 per cent of the total. Of course the towns do not pay for themselves directly. The owner is lucky to break even, while losing the interest on this investment; but the outlay is justified by the benefits.

Miners' houses must be built at least as good as those which the tenants would build for themselves, Mr. Eavenson believes. Some companies south of Mason and Dixon's line build even better than that. The need for substantial houses, large lots, fences, a good water supply, sewerage systems, good roads, bath houses and adequate community buildings is growing. In the future the mine owner will be compelled to go the limit in this respect as a result of the scarcity of good labor occasioned by the emigration laws now in force. American labor will not permit its standard of living to lower, he thinks.

Before seeking financial aid for the opening up of a new property it is now necessary to have all preliminary studies and calculations made. Layout plans, capacity, market possibilities and the estimated cost must be presented in the proposal for financial assistance. An allowance must always be made for working capital. If a mine intends only to produce and not to operate a sales office, it must have on hand sufficient working capital to cover at least two months' operation. On the other hand, if it decides to sell directly the coal



The South Is Improving

Good steel tipples like this one which the Blue Diamond Virginia Coal Co. has just finished give the South the reputation of surpassing Pennsylvania in mining advances. Monitors on an incline dump into a big bin. A steel pan conveyor feeds the shaker screens which can make six sizes of coal plus several combinations. Block and egg coal can be rescreened. Steel pan conveyor booms can load 3,000 tons into railroad cars in eight hours here.

which it produces the working capital must cover no less than six months of operation.

The most satisfactory method of financing a new mine is by the sale of common stock, but nowadays the stock purchaser is wary of speculation and wants a more assured income as from preferred stocks. Especially is this true in the financing of large companies. Bond issues in large amounts are dangerous in that they expose a company to loss of control. In this case the bond money is intended only for working capital and clearing standing debts. It is usual to issue bonds to the extent of one-third to one-half of the property value.

In a consolidation now pending involving \$40,000,000

service from steel in a mine whose water is 1½ per cent sulphur. It has been his experience that the cost per year of maintaining mine cars of steel is one-third of wooden cars and that the latter are out of service 5 to 20 per cent of the time.

The solid type car is being more generally used, but drop-bottom cars are coming in. The type of mine car regulates the character of the dump as does also the output desired. For outputs near 3,000 tons from shaft mines, self-dumping cages are absolutely necessary; over this tonnage it is wise to consider skip hoisting.

Present-day requirements of the domestic market have driven the producer to the more general use of modern tippie equipment—of moving screens, picking



Modern Mining Town in Big Sandy Field in Eastern Kentucky

Efforts like this on the part of the mine operators do not return them any direct earnings on the investment in houses, Mr. Eavenson told the Pittsburgh Coal Mining Institute, but the indirect benefits in satisfied labor are worth having. Kentucky and West Virginia have many such towns, most of them recently built.

it is proposed to issue instruments in the proportion of 25 per cent of bonds, 20 per cent of preferred stock and 55 per cent of common stock. A four-month coverage of working capital is intended in this deal.

The first steps toward actual design of a new mine are the choice of track gage and type of mine car. Though in American practice the track gage ranges from 32 to 56½ in., efforts toward standardization have established a preference for the 42-in. track gage, particularly by manufacturers, with second and third choices of 36 and 48 in. respectively.

Good properties are sometimes spoiled by poorly chosen types of mine cars. The car should be made as large and low as possible, Mr. Eavenson thinks. He has designed a steel car of the underslung type which, although it holds 3 net tons, is only 23 in. high. Southern plants take to cars of steel, a practice which has not met with much favor in the Pittsburgh district. He cannot understand why this district is backward in this particular. Acidity of mine water ought not to be an absolute deterrent. He mentioned one company mining the Pittsburgh seam that got fifteen years of

tables and loading booms. The movement is less noticeable in the Pittsburgh field than in some non-union regions where it is not unusual to see five sizes being prepared over picking tables and lowered to railroad cars by loading booms. The extreme care with which coal is being prepared by mines in West Virginia and Kentucky may make it doubly difficult for the Pittsburgh district mines to win back their old markets.

A limiting factor for large output may be ventilation. This problem should receive careful study before the capacity of a mine is determined. Mr. Eavenson knows of one mine which may never reach its capacity of 4,000 tons a day because it gives off 2,500,000 cu.ft. of gas every 24 hr. under limiting conditions. This mine is opened up by groups of six to eight headings on the mains and is equipped with a fan which is capable of developing 400,000 cu.ft. of air per minute. However, at capacity this fan under existing conditions may work against a water gage in excess of 4 in.

In answer to a question by Francis Feehan, of the U. S. Bureau of Mines, Mr. Eavenson advised as a good investment at all mines the erection of a bath house.

To W. D. Parker, of the U. S. Bureau of Mines, he remarked that roller bearings on mine cars are economical, more so in big mines or where the haulage roads are not level. Mr. Maize asked about the place of rope, electric and conveyor transportation of coal along a 5 to 6 mile haul. He was told that electric haulage is far superior to that by rope. Where the tonnage is great enough, 4,000 tons or better, conveyor haulage bids fair to outdo even electric haulage in many cases.

State Inspector John I. Pratt, president of the Institute, sought an expression from Mr. Eavenson as to whether more extended use of machinery such as loaders and conveyors will require much greater investments for a given output than has been required in the past.

SEES ELIMINATION OF SMALL PRODUCER

It is the opinion of Mr. Eavenson that the investment will be bigger. Mechanical mining has not yet reached the stage where it might be considered absolutely successful. At least four or five mines equipped with loading machines or conveyors are doing well. The change to such devices must come and is coming. With the acceptance of complete mechanization mines may work two shifts a day and will be made bigger producers. The large investments which will be required to derive the economies of that day will be out of reach of many men who are now in the coal business. The small producer will go.

W. L. Affelder, talking on issues involving safety, frankly "laid down the law," declaring that, in great measure, mine officials and executives are responsible for the slow movement toward greater mine safety. He believes old-timers are hardened as the result of frequent accidents in the past, which they are disposed to regard as inevitable in mining. He would like to see the younger generation of officials weaned away from that idea. The tendency "to pass the buck" is too prevalent when accidents occur. There is too much disposition to look for an alibi and to put the responsibility on the shoulders of the unfortunate victim. Before workman's compensation was put into effect more zeal was exercised in looking for contributory neglect than in seeing to the victim's welfare. He is afraid this attitude is still too much in vogue.

Prior to his attendance at an executive meeting of the Western Pennsylvania chapter of the National Safety Council recently, he himself held the view that accident is the necessary toll of the industry. But he had that notion knocked out of his head during an exchange of experiences by members at this gathering. He retold the experiences of the Carnegie Steel Co. at its Duquesne plant.

By an intensive safety campaign the Carnegie company has succeeded in bringing down gradually what had been held as a normal accident rate in the steel industry to the point where the company is justly proud of its achievement. The plant employs 6,700 men; during the first 27 days in May the plant operated not only without a fatal accident; but it succeeded in avoiding even a single lost-day accident.

In 1924 the bituminous mines of Pennsylvania suffered 10.83 fatal accidents in each million man-days. His company last year had five fatal accidents for each million man-days. At the former rate based on the loss in bituminous mines of Pennsylvania the Carnegie Steel Co. could not have been criticized by the coal industry had it had two fatal accidents in its Duquesne

plant during the time it maintained a clean slate. Mr. Affelder, in sulphurous language demanded to know why the coal industry can't do regularly as well as the Carnegie Steel Co. did in May.

"It can be done, I don't know how," he said, "but I'm going to find out." Accident prevention requires a different angle of approach. He is afraid too many attempts have been made to hammer safety home whereas, logically, it is better to use a milder and more personal approach. It is necessary to throw the burden on the individual by creating in him a *desire* to be safe rather than to *force* him to it.

Officials always ought to be on the alert for opportunities in which men might get hurt. Avoidable means of accident should be removed at any cost, inasmuch as the danger is great enough from unavoidable accidents. Many officials pat themselves on the back because they have records of non-fatalities over long periods. This is wrong because the line of demarcation between the occurrence of non-fatal accidents on the one hand and of fatal accidents on the other may be slight indeed. Exactly the same conditions and agents may be present in both.

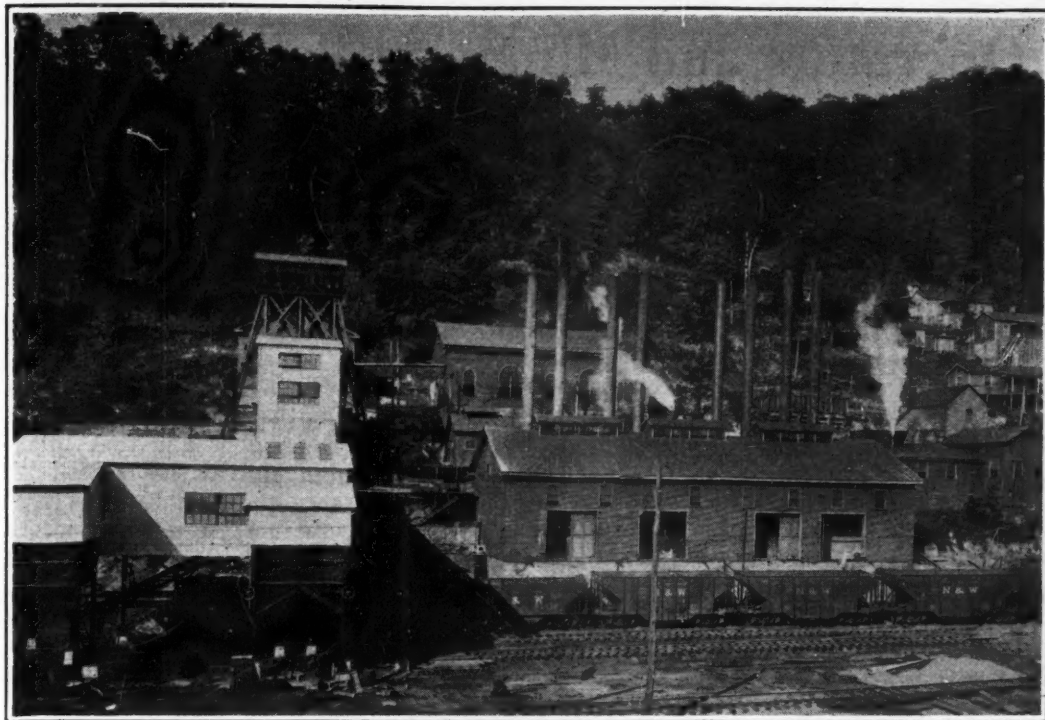
For instance, one of Mr. Affelder's miners was squeezed about the hips between a rib and a mine car. The injury was minor but it would have been fatal had the man been squeezed farther up on his body. Another of his miners was borne down to a crouching position by the fall of a 3-ton rock. The man escaped injury, but by all laws of chance he should have been killed outright. It is equally necessary to guard against conditions which might cause trivial accidents.

He does not believe in disciplining. A man resents it and is liable foolishly to satisfy himself by getting back at the boss. For instance, if a man is disciplined for not setting a post in his working place, the next time and during the interval between two visits of the boss he might deliberately work under an unsupported roof which ought to be propped by two posts. How much better it is to appeal to the negligent miner's love of family to induce him to practice safety.

FEEHAN PRESENTS ACCIDENT COSTS

Mr. Feehan gave some figures on the cost of accidents in the anthracite field during the first four months of 1925. During that period, the Department of Labor and Industry of Pennsylvania reports, there occurred the loss of 1,300,000 man-days. This, of course, included many trivial cases of injury. At this rate for the entire year and at \$5 a day the loss to the mine workers in round numbers would be \$20,000,000. The loss to the anthracite mine owners would be equally as great.

Speaking for the U. S. Bureau of Mines on the work of the Joseph A. Holmes Association, J. J. Forbes, of the safety extension service division, said the real solution lies in systematic organization and co-operation, which can be secured through chapters of this association. The association reaches the men, women and children with its story by mixing safety talks with entertainment and refreshment in community gatherings. Of the 136 chapters organized by the Bureau there are 25 in Alabama. In that state the movement has been entirely successful. The Standard Oil Co. reports that at its Baton Rouge (La.) plant where the Joseph A. Holmes plan is in operation, after eighteen months of education 5,000 men worked forty-seven days without a lost-day accident. The general



No. 1 Mine, Superior, W. Va.

This mine is owned by the Lake Superior Coal Co., of Cannelton, W. Va., and located about three miles from Welch. It operates the Pocahontas No. 3 which, as will be noted, is reached through a shaft. The coal is from 42 to 72 in. thick. At Welch the beds are well below water level. It was for this reason that development around the capital city of McDowell County was slow. Of recent years the growth in this part of the smokeless field has been rapid.

manager of a coal company in Alabama, who at first was reluctant to give the plan a trial, admits that the chapter which he finally did establish did more in five months than all other efforts combined had done in five years.

In accordance with the plan of the Institute to present to the members all phases of mining, S. A. Taylor, consulting mining engineer, of Pittsburgh, Pa., was put on the program to talk on "Drilling for the Proving of a Coal Property and Other Allied Purposes." He outlined the three methods of drilling followed—core drilling, spudding and hand drilling.

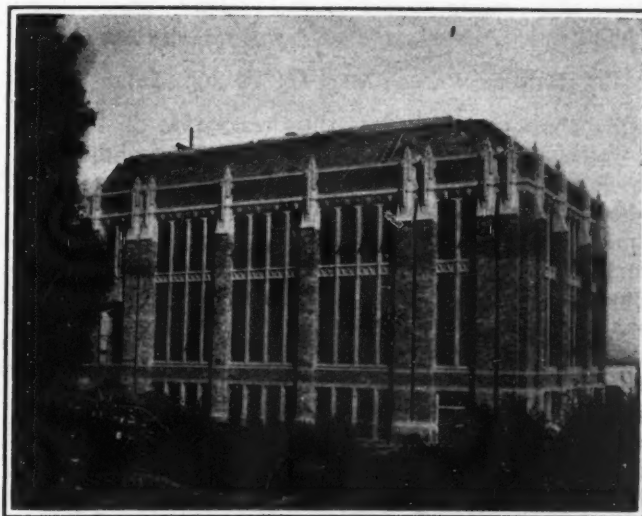
In core drilling he said it is better to use the diamond drill than the cold-shot drill because the latter is apt to break up friable coal whereas the former will give a true core sample. Spud drilling has its use in sinking holes for pump lines and power cables and for determining the elevation of coal. He believes the maximum diameter of a hole that can be made by a spud drill is 24 in. This diameter will afford a large area for wires, pipes and even for ventilation. He believes this method of drilling will be perfected and will aid in the ventilation of gassy mines as, for instance, in Greene County, Pa., where much gas is encountered. The greatest difficulty thus far experienced in spud drilling is in keeping the hole straight.

Hand-drilling, of course, is confined to light cover where it is particularly useful in proving stripping properties. He gave this tip: If the strata above a stripping property is too hard for hand drilling, it is likely to be too hard for steam shovel operation without the use of excessive quantities of explosive.

A diamond drill hole which strikes a fault or want is not wasted. A study of its core will reveal useful information and the hole itself will serve as a gage for the putting down of other holes around it in determining the extent of the wanted area.

Where any doubt exists as to the persistence of the a seam, as in the Freeport measure, it is well to drill ahead of advancing main entries so that if a wanted area is discovered the mine layout may be altered to avoid unnecessary expense.

With \$300 of the dues collected from its 1,000 members the Institute is having prepared three engraved parchment trophies for the best low accident records of companies in the area the organization covers. One trophy will go to the record company mining the Pittsburgh seam in Allegheny and Washington counties, and that part of Westmoreland County on or west of the Youghiogheny River to the Fayette County line. The second will go to the winner in the thick Freeport seam. The third will be given to the company having the best record in the two districts. The winners will keep these trophies and new ones will be presented each year. The records will be determined on the basis of the ratio of tonnage to lost-time accidents, the latter to be weighted in accordance with the International Industrial Accident Committee standard.



Far Western Mining School

This is the mines laboratory building at the University of Washington in Seattle, Wash. All the coal work in the university's college of mines has been carried on for the past three years in this structure. The space within the three bays at the right is devoted to this use. The photograph shows one-half of the college of mines building as it will be when the building program is complete.

Anthracite Operators and Miners Still Far Apart On Leading Issues in Wage Controversy

By Sydney A. Hale

Special Contributor, *Coal Age*
New York City

LITTLE PROGRESS and no agreement upon any of the controverted points marked the first week's negotiations of the subcommittee of the anthracite operators' and miners' meeting at the Hotel Traymore, Atlantic City, N. J., July 14-17, to consider the demands framed at the tri-district convention of the hard-coal workers at Scranton, Pa., earlier in the month. The question of the wages to be written into the contract to succeed the present one expiring on Aug. 31 was discussed in only the most general terms. The issue of the check-off, about which the battle raged in 1922, was mutually avoided.

Spokesmen for the producers, however, made it clear that they were in deadly earnest with respect to the two cardinal points in the address made by S. D. Warriner, chairman of the Anthracite Operators' Conference, at the first general session of the full joint committee—appended to this report. These points were the desire of the producers to make an agreement with the miners which would eliminate any possibility of a suspension on Sept. 1 and that it would be suicidal for the industry to attempt to increase the price of its product in the face of existing, vigorous competition with other fuels. Every strike in the anthracite region, it was pointed out, had resulted in the permanent loss of business in some sections of the country and the operators want to encourage no further curtailment of their potential and actual markets.

Although no official statement was made by the representatives of the mine workers, unofficially they indicated that they still stood with President Lewis in his rejection of the proposal to continue work after Aug. 31 if no agreement had been reached by that date, and to submit disputed points to arbitration. This, they said, would only prolong negotiations indefinitely.

MINERS WANT RAILROADS TO FOOT BILL

On behalf of the miners the theory that an increase in wages could be met by a reduction in freight rates which would permit an increase in mine prices to cover a boost in pay and still leave something to the consumer was again advanced. The refusal of the operators to join with them in a petition to the Interstate Commerce Commission to take such action was stressed heavily. It was pointed out that these rates are now before the Commission in the general investigation instituted by that body two years ago on the recommendation of the United States Coal Commission and that the United Mine Workers have taken no active part in those hearings. When the question was asked how any investigation into rates started now could possibly be concluded before the expiration of the present wage agreement, the miners had no answer.

There were evidences of irritation upon both sides when the subcommittee began its labors. The fact that Mr. Warriner and W. J. Richards, president of the Philadelphia & Reading Coal & Iron Corporation, felt that their long service justified their retirement from

subcommittee membership led to charges from the miners' camp that the operators were purposely prolonging the negotiations by asking the union representatives to deal with "second string" men. The fact that Mr. Lewis had quit the conference to repair his fences in the bituminous regions and that International Vice-President Philip Murray, his substitute, did not put in an appearance the first day the subcommittee met last week did not put the producers in a more friendly frame of mind. Considerable quiet resentment was expressed over the attack upon the operators' membership on the subcommittee, including as it does the head of one of the largest companies and executives of others whose positions put them in close touch with the labor situation. It was further emphasized in defense of these representatives that they had full power to act. The union representatives, on the other hand, are bound by the demands of the tri-district convention and any modification of those demands which they might agree to are not binding upon the workers unless ratified by that convention.

SENSITIVE TO PUBLIC CRITICISM

The sensitiveness of both sides to public criticism was again emphasized when plans to adjourn over the present week were abandoned. It had been tentatively announced that the subcommittee would recess on July 17 to July 28. This was for the purpose of giving Rinaldo Cappellini, president of District No. 1 and a member of the subcommittee, an opportunity to preside over the district convention at Wilkes-Barre, Pa., which opened July 20, without absenting himself from the subcommittee sessions. Editorial comment on the "leisurely" fashion in which the negotiations were proceeding brought about a quick change in program. Two sessions, instead of one, were held on Thursday and when the meeting adjourned early Friday afternoon the next session was set for July 21. Both sides were prompt to deny responsibility for delaying the proceedings.

Discussion of the last two clauses of demand No. 2 of the miners was as far as the subcommittee got at the first day's session (July 14) last week. These clauses read as follows:

" . . . that the contract laborers' increase now being paid by the operators shall be added to the contract rates; that the differential in cents per day between classifications of labor previous to the award of the United States Anthracite Coal Commission shall be restored."

Prior to the supplemental agreement of Nov. 1, 1918, signed during the regime of the United States Fuel Administration, payment of contract laborers had always been taken care of by the contract miner. That agreement, however, in making an advance in laborers' rates, split the payment between the operator and the contract miner. This system was continued by the award of the United States Coal Commission in 1920. That award carried a 17 per cent increase to the laborers, but also provided that the contract miner was

to assume and pay "so much of said increase as shall be represented by the application of 65 per cent to the rate per basic shift, as established under the agreement of May 5, 1916, and the difference between said amount and the total increase to the contract miners' laborer shall be assumed and paid by the operator." The basis of the percentage division was the fact that the same award increased contract rates 65 per cent over the 1916 figures.

On behalf of the miners it is contended that this system leads to confusion and dispute and that a return to the method in vogue prior to 1918 is in order. In the subcommittee meeting they claimed that the demand could be worked out on a percentage basis. The question raised was whether a return to the old system would not be as provocative of disputes as the present method. Consideration of the demand was continued in order to give the miners a chance to submit concrete examples of how their proposed percentage plan would work out.

The supplemental increases in wages allowed during



W. W. Inglis

Chairman of the Operators' Subcommittee
in wage negotiations with Union
Representatives

the war were based upon the rates fixed by the 1916 agreement. Barring certain specified classes of labor on the day basis, increases to company men fell into two groups—increases to company men receiving less than \$1.54 per day under the 1916 contract and increases to men receiving more. The final wartime agreement (November, 1918) gave the higher paid men increases of \$1.80 and \$2 per day over the 1916 bases; to the lower paid groups, an advance of \$1.20. The 1920 award also recognized the same two major divisions and gave the higher rated group an increase of 17 per cent over 1918 rates, subject to a minimum rate of 52½c. per hour or \$4.20 per shift. These rates were increased 10 per cent in 1923 by the Pinchot settlement.

The minimum rate proviso of the 1920 award had the effect of narrowing some of the differentials that had previously existed. For example, an outside company man receiving \$1.55 per day under the 1916 rates by the application of the minimum provision was advanced to \$4.20 in 1920; another outside employee receiving \$1.60 per day under the 1916 rates came under the percentage increase and was advanced to \$4.21, narrowing the differential from five cents to one cent. If the comparison is made between outside and inside company

men, the fact that the 1918 agreement gave the latter a \$2 advance, as compared with \$1.80 to outside men, makes the changes in certain differentials still more marked.

The miners, of course, desire to retain the \$4.20 (\$4.62 under the Pinchot award) minimum, but argue that the old differentials should be restored as a proper recognition to the more skilled classes of labor. At the most, they say, the restoration will mean increases of only a few cents per day and will apply to only a small percentage of the workers. Beyond a general discussion of uniformity in rates, however, the subcommittee made no progress in the consideration of this clause in the miners' demands.

The sessions on Wednesday and Thursday broadened into a general discussion of the cost of production and distribution in its bearing upon wages. The miners suggested that a spread of \$7 per ton between the f.o.b. mine price and the retail price at Philadelphia opened an avenue to profitable exploration in ways to advance wages without advancing the cost of coal to the ultimate consumer. From the contention that a wage advance could be met easily out of the profits of the wholesale distributors and the retailers, the line of attack was extended to include freight rates and royalties. Refusing the request to join with the miners in a petition to the Interstate Commerce Commission, the operators, as before stated, pointed out the fact that rates were now being investigated by the Commission and that that body had no jurisdiction over the question of royalties or over distribution costs other than transportation charges.

DISCUSS QUESTION OF HAZARDS

Mr. Lewis' "blood money" argument for higher pay also claimed some attention. The operators frankly admitted that no widow or children could ever be adequately compensated in cash for the loss of a devoted husband and father. In so far, however, as it is possible to give weight to the hazards of employment in pay schedules, the producers insisted that this had already been done. Moreover, a study of accident statistics compiled by the Bureau of Mines and the Department of Labor shows a steady reduction. From 1914 to 1924 there was a 16 per cent reduction in total fatalities, the total falling from 595 to 496. Underground fatalities decreased over 17 per cent in the same decade.

Figures on a tonnage or an employee basis are still more favorable. In 1914 there was one fatality for every 152,000 tons produced; in 1923, one fatality for every 183,000 tons, an increase of 21 per cent in tonnage per fatality. For underground workers the tonnage per fatality rose from 170,000 to 208,000 tons. Fatal accidents per thousand workers declined from 3.31 in 1917 to 3.01 in 1923.

Fatal accidents per thousand employees on the railroads, it was pointed out, are 11 per cent greater. Commenting on these figures, the Department of Labor says:

"Coal mining presents less hazard than does train operation. The common opinion to the contrary is the natural outcome of the fact that mining casualties come from time to time in sudden catastrophies which excite prolonged interest on account of rescue effort, while the total railway accidents are the accumulated result of many single accidents. Coal mining is being conducted in a manner which is less dangerous to the miners than has been the case in the past."

Limitation of output was another subject touched upon in the subcommittee meetings. The miners argued that there were no restrictions encouraged by them and that to try to keep down tonnage would decrease the earnings of their own men. This argument was sharply challenged by the operators, who offered to cite actual cases.

One of the many instances of restriction in production is furnished by a strike at the Coal Brook colliery, where the men walked out because some miners had loaded more than five cars a day. The "guilty" workers were fined \$10 each and, refusing to pay the fines, the local union countenanced a suspension of 11 days. In another case, the chief clerk at one of the collieries was informed that the local union had passed a resolution to discipline miners who loaded more than a certain number of cars daily. For the first offense a fine of \$5 was levied; for the second, \$10 and for the third, "a man would have to take his tools from the property."

In passing upon a case taken before the Conciliation Board and appealed, the umpire said that "the record stands that the weight of evidence supports the contention that the cause of the earnings of the complainants being what they are is the action of the local in endeavoring to put into effect, in violation of the agreement, a restriction of output, and the action of the complainants in limiting their output per day to the four car limit that has been set."

In another case, where a mine foreman asked two men who had finished loading their sixth car at 10:40 a.m. to load at least another car before quitting work for the day, the miner and his laborer informed the foreman that such action on their part would result in a \$50 fine by the local. In still another case, the chair-

man of the grievance committee informed the general manager that the local union had passed a resolution forbidding any man to load more than two cars and any two men to load more than four cars. The president of one local even admitted the existence of such a rule and said it had been passed because the union did not want the operators to be able to show a large wage earned by individual miners. These cases are only a few of the many that the operators are ready to offer to uphold their contention that there is a deliberate attempt upon the part of the union to restrict the output, and, as a result, the earnings, of its members.

The final session of the week was devoted to further consideration of the split payment to contract miners' laborers and to another general discussion of wages. The latter was featured by a demand that the operators furnish the union with exhibits showing the salaries of the executive officers of the producing companies and the sums paid out in legal expenses. The operators reported that these figures were not germane to the present negotiations.

After the meeting had adjourned on Friday, Vice-President Murray of the United Mine Workers issued a statement attacking "propaganda" from the operators criticizing the failure of President Lewis to attend the week's conferences. The statement also disclaimed responsibility for any lack of progress made in the negotiations. Quoting accident statistics derived, he said, from Pennsylvania state reports and purporting to prove that three anthracite miners were killed and a like number permanently incapacitated for manual labor every day the mines worked, Mr. Murray reiterated that the present demand for increased wages was based upon the hazards of the industry.

Anthracite Operators Demand Either Wage Cut Or Higher Productivity

THE ANTHRACITE operators, in the first statement of their position to the miners at the joint conference in Atlantic City, July 9, declared for either a substantial decrease in wages or a substantial increase in workers' productivity if the present high scale is to be maintained. They said wages cannot be increased without raising the price of anthracite to the already harassed consumer and competitive conditions make any upward trend of prices suicidal. The operators held strongly against granting the check-off and pointed out that they already recognize the union by meeting with its representatives.

They urged the miners not to precipitate a strike Sept. 1 by quitting work in case an agreement has not been reached by that date. Instead, production should continue while the possible disagreement is dissolved by arbitration. Future suspensions ought to be avoided, the statement said, through negotiation of a long-term contract with provision for the adjustment of wages to meet changed economic conditions during the term. The statement, which was read to the conference by S. D. Warriner, chairman of the anthracite operators conference, in part, said:

"We have read your demands with something approaching amazement, because as a whole they show such utter failure to consider the realities of the anthracite situation. You seem to think that anthracite is a necessity, for which the consumer will pay any price, however high. This is not the fact. Anthracite

is not a necessity. Its use is subject to the same competitive laws that govern other commodities. If we do not give good service and maintain reasonable prices, the consumer will turn to other readily obtainable fuels.

"Where is the money to come from to pay present wages, to say nothing of meeting new demands? Not from the coal consumer, because he has already indicated in no uncertain terms that he believes the price of anthracite is already too high. To attempt to increase it would be suicidal. The real issue is the extent to which labor rates and costs can be reduced.

"Mr. Lewis is authority for the statement that the only way in which fair wages can be paid is by continued increased productivity on the part of the worker, and it therefore becomes necessary for us to consider in what way this result can be achieved.

"We must have a substantial reduction in labor costs. If this can only be obtained by a reduction in existing wage scales, then we believe that we should have such a reduction. If, on the other hand, through our joint constructive efforts some plan can be devised by which the productivity of the worker can be so increased that even with the retention of approximately the same wage scales a material or substantial reduction in labor costs can be secured, then our joint efforts should be directed to that result.

"Anthracite miners at the present time are enjoying higher annual earnings than any other workers of

whom we have found a record. Your annual earnings, as shown by official reports, are higher than those of such highly paid employees as railroad workers, machine shop employees, electrical workers, printers, soft-coal miners and metal miners. The average annual earnings of all anthracite employees, which includes a large proportion of unskilled labor, is upward of \$2,000. The contract miners average over \$2,500, or \$1,200 more than the average for all industries. The average annual earnings of all anthracite employees is more than \$700 above the average for all industries. Your rate of increase in wages since 1914 is 192 per cent, while in railroading the increase has been only 141 per cent; in manufacturing 129 per cent, and in building 111 per cent.

"Three years ago and again in 1923, we prophesied that the increasing cost and price of anthracite would restrict its market and result in loss and unemployment in the industry. What was then a prophecy is now about to become a reality and one from which you, the miners, no more than we, can escape.

"We are faced by increasing competition from oil, and the figures reporting the number of installations of oil-burning apparatus are startling in their proportions. An authoritative estimate is that 5,000,000 tons of anthracite in domestic consumption has been replaced by oil. Other competition comes in the form of gas for heating purposes. One of the largest gas companies in the country has just announced that it has perfected still more economic apparatus for heating. The result of this is that the use of anthracite as a summer fuel has practically ceased.

"The extension of the use of electricity is another menace. Perhaps more important than any of these is the encroachment of coke upon our market, and the number of coke producing plants is steadily increasing.

"Most of the companies are realizing less upon their production today than they did in 1923. They have absorbed a large part of the ten per cent wage increase then granted to you. They cannot continue on such a basis. A large part of the production in the past year has been marketed at a loss; another large section of the industry has seen its profits approach the vanishing point. You cannot fix wages and cost of production at a point that can be borne only by a few companies exceptionally situated.

"You will simply delude yourselves if you accept the mistaken idea that the labor cost of producing anthracite is not by far the main factor in the total cost. Seventy-five cents out of every dollar received by us is paid to you for labor. The balance of 25c. is a very narrow margin out of which to met charges for material, machinery, taxes, insurance and return on investment.

"Do not fool yourselves by looking at retail prices. By reason of transportation and distribution charges, the retail price is necessarily greatly in excess of the mine price.

"Do not fool yourselves by looking solely at the prices for the domestic sizes. Domestic sizes are no more than two-thirds of the total product; the other third is sold at a great loss, although the labor cost and all other costs in producing it are the same.

"With increasing competition and diminishing sales; confronted by the self-evident proposition, if our markets are to be retained, that the prices for our product must be made more attractive to the consumer; with a narrow margin of profit on the average, and an absolute loss on a large part of the production, are we not faced

with the necessity of lowering our cost of production if we are to continue to afford the opportunity of full-time employment?

"We agree to the proposition that anthracite workers should be well paid, and in asking for wage reductions we are not departing from that proposition. Just what the amount of such reductions should be we leave for discussion by the negotiating committees.

"As to the demand for full recognition of the union, you already have full recognition in the sense in which recognition is generally defined throughout the trade union world. We negotiate with your union and contract with your union. By meeting with you here we recognize your union. On the other hand, if this demand means the check-off, it seeks something not generally demanded or practiced by other unions. You are too familiar with what the operators and the American public think of the check-off to call for further discussion of the subject by us. Our opposition to the check-off is unabated.

LABOR PRODUCTIVENESS LOWER

"It is a fact much to be regretted that in spite of constantly increasing wages and the employment of labor-saving devices of all kinds, the productiveness of labor in our industry has diminished rather than increased; it is no better than it was when you were receiving half as much in wages and were unaided by many of the improvements that have since been introduced.

"If restrictive rules, outlaw strikes, and other uneconomic conditions are eliminated and our employees will work a full eight hours, which is the length of day agreed upon, it would be possible to increase productivity and decrease labor costs without a corresponding decrease in earnings.

"One of the most important things for which we should jointly strive is industrial peace and uninterrupted production. The public is disturbed over periodic stoppages or threats of stoppage in the industry. In competition with other fuels, we often meet the argument that the supply of anthracite is not dependable, owing to interruptions of production through strikes. Many large sales are lost for this reason. To allay this fear and secure the confidence of the consumer we should do away with a militant attitude and settle our differences without resort to suspensions.

"Because of the differences which now arise between us, you asking for an increase in wages and we asking for a reduction, we wish to urge that provision be made at the outset against the possibility of a suspension on Sept. 1.

"Such joint action on our part would deserve public confidence. It can be accomplished by an agreement to the effect that if our respective committees are unable to agree upon any issues, such issues shall be referred to arbitration, upon the understanding that production shall be continued at the present wage scale until the arbitrators render an award.

"Let me say to you here and now that the operators are prepared to co-operate in any fair and practicable plan, not only to prevent a suspension next September, but to provide means to prevent suspensions in the future in order that public anxiety in this respect may be put at rest. This can be accomplished by a long term agreement with provision for the adjustment of wage rates during that term so that wages may be conformed to changing economic conditions."



News Of the Industry



Cause of Barrackville Blast Unknown; Company Is Exonerated of Negligence; May Have Been Thirty-fourth Victim

That the cause of the explosion and its source are unknown was the verdict returned by a coroner's jury at midnight, July 16, after a thorough investigation of the Barrackville (W. Va.) mine disaster in which 33 lives were snuffed out March 17, last. Throughout the day of July 16 many witnesses were called at the inquest, which was presided over by County Coroner Lloyd E. Fitzhugh in the Marion County Circuit Court room, in Fairmont. Robert M. Lambie, of Charleston, chief of the West Virginia Department of Mines, was the chief witness.

Mr. Lambie, while on the stand, testified that there was nothing shown to prove negligence on the part of the Bethlehem Mines Corporation or any of its employees. He was not convinced that a thirty-fourth body was found in the mine. The chief was of the opinion that it may have been a portion of one of the 33 bodies.

Thomas Jarrett, of Weston, a state mining inspector, testified that while on duty at the mine after the explosion, and when the cleaning-up process was under way, a company inspector had called his attention to a piece of paper that was used to enclose Monabel, a permissible. He directed that the paper be turned over to the superintendent for examination. Judging from its appearance, the paper probably had been in the mine for a long time and was trampled upon. It developed that the permissible without a cap was harmless. When the paper was exhibited in the court room Jarrett said that if it was the same paper shown to him in the mine, it must have changed its color. The quantity of powder in the paper probably was equal to three sticks that had been crushed. It was found about 100 ft. away from where the torso of one of the victims was found. In the opinion of Jarrett a short-circuit from a feed cable caused the explosion. A portion that was cut off showed that it was burned in two, he added.

V. E. Sullivan, of Charleston, a state mining inspector, thought that it was a dust explosion that started near the bottom of the shaft.

In the opinion of Robert Lilly, of Mount Hope, a state mining inspector, a general coal-dust explosion resulted from an arc of a cable, which had the appearance of being roasted and blistered. In his opinion all of the

force traveled from that point of the mine (2½ N. W. main butt entry).

C. W. Stuart, of Thomas, a state mine inspector, said he was of the opinion that the explosion resulted from an arc formed on a feed wire at 2½ N. W. main butt entry.

Attorneys representing the United Mine Workers attended the inquest and asked a number of questions. Although no direct charges were made, a number of press accounts intimated that the mine was dynamited.

Evidence Found in Sump

In the opinion of M. Benton Mitchell, general superintendent of the Marjon Division, the explosion occurred at the foot of the main hoist. He based this opinion upon the fact that a 9-in. brick wall in a sump at the bottom of the shaft, and a 10 x 12-in. oak timber, across the top of the brick, were blown outward from the sump. The heavy timber was broken in two. Because of moisture from water collected in the sump, Mr. Mitchell said that a dust or gas explosion at that point was impossible.

In the opinion of Frank Haas, mining engineer of the Consolidation Coal Co., there was not sufficient violence shown at the base of the shaft to support the theory that dynamite or nitroglycerine had been exploded there. He did say, however, according to press reports, that dynamite or nitro-glycerine could have been used at that point so as to cause a general explosion in the mine, but that it would have been necessary to use several hundred pounds of coal dust in such a way as to communicate the explosion to other portions of the mine and said he believed that this would have required more time than he believed any person attempting such a thing could have had. It would have been easier, Mr. Haas said, and much more logical for such a person to have scattered black powder on top of the lagging or cross-timbering, under a section of bad roof further back in the mine, because coal dust gathers on the lagging and ignited black powder would hastily precipitate an explosion.

A mine chart showed that the highest gas content of mine air samples taken from the mine analyzed 0.5 per cent and both Mr. Mitchell and Mr. Haas agreed that as much as a 5 or 5½ per cent gas content is necessary to

New Orient Has Big Output

The Chicago, Wilmington & Franklin Coal Co.'s mine No. 2, known as the New Orient, at Zeigler, Ill., made a new production record July 10, when one day's output reached 8,687 tons. This achievement is all the more remarkable in view of the fact that one hour was lost in operation and the mine is still in the development stage, the first coal having been hoisted from the main shaft Sept. 1, 1924. Prior to that time all coal had been hoisted from the airshaft, which is equipped for that purpose. The hoist at the New Orient is of the skip type, the coal being dumped into large hoppers at the bottom instead of the cars being hoisted to the tipple before being dumped. The mine is now working with about 100 men and has been averaging five days a week all summer, but much of the time it works six days a week. Much larger output is expected when the mine is fully developed, as the operators contemplate a capacity of 12,000 tons for it.

precipitate an explosion. In the opinion of Mr. Haas if the mine was exploded he was inclined to believe that black powder was the agency rather than dynamite, because it leaves no trace. Less gas than usual was found in the Barrackville mine, it was testified to by an official of the company.

Stephen Arkwright, president of the Arkwright Coal Co., of the J. A. Paisley interests, a man of 50 years' experience in coal mining, testified that he believed that the explosion originated at the top of the main hoist. The shattered condition of the concrete at that point and the amount of debris at the bottom of the shaft seemed to indicate this, he said. Falling debris, he thought, may have broken the timbering and the brick wall at the bottom.

Much attention was paid to the unidentified torso. Dr. C. W. Waddell, of Fairmont; Undertaker R. C. Jones, of Fairmont, and John T. Moore, of the Workmen's Compensation Board of Charleston, testified that it is possible that the torso is that of a miner named Saunder, who was killed, but none would specifically say that it probably is. A torso lying for a month in the slate and dirt of the mine, it was testified, would shrink sufficiently to account for the difference in size pointed out between Saunder's in life and the torso when found.

Non-Union Mines Suffer Keenly from Overproduction as Output Mounts in Northern West Virginia Strike Zone

Dynamiting of a transmission line of the Monongahela-West Penn Public Service Co., between Lumberport and Dola, Harrison County, W. Va., early in the morning of July 20 is believed to have been the work of intruders, who sought to stop non-union coal production on the West Virginia short line of the Baltimore & Ohio R.R. Seven poles were dynamited. There are seven mines located on the line, but only two, Robey and Laura Lee, both plants of the Hutchinson Coal Co., have been active recently, and comparatively little coal could be run on Monday. Repairs were made late in the day.

Overproduction of coal at the non-union mines in the northern West Virginia strike area is beginning to be keenly felt. Not only are price levels being affected but some of the non-union mines that worked almost every day have dropped down to two and three days a week.

Rivesville mine of the Consolidation Coal Co., at Rivesville, Marion County, began to operate during the latter part of last week. From last reports 15 men were cleaning up the mine preparatory to actual production.

During the first four days of last week the non-union mines produced 5,247 cars of coal, and union plants loaded 852 cars. A new daily record for non-union production was reached July 14, when 1,334 cars were loaded. On the same day a new daily production was attained on the Monongah Division, B. & O., for open-shop coal production. Non-union plants along the Cumberland Division, B. & O., loaded 140 cars July 15, which also constituted a new day's loading record since the strike.

Union production showed some increases last week also when plants in northern West Virginia produced 235 cars on July 15, which was the heaviest daily tonnage loaded since April 18, when 247 cars were loaded.

Field representatives of the United Mine Workers have been busy gathering data in the region, and it is reported that some of the data in reference to abrogations of contracts will be submitted to the U. S. Department of Labor.

Van A. Bittner, chief international representative of the United Mine Workers in northern West Virginia, attended a conference in Philadelphia during the latter part of last week with Attorney W. A. Glasgow, of Philadelphia; Attorney Thomas C. Townsend, of Charleston, and Earl E. Hauck, of Indianapolis, connected with the legal department of the international union.

After union miners were engaged in cleaning up mine No. 1 of the Gilbert-Davis Coal Co., a large plant in Scotts Run, and had loaded three cars of coal, the men quit last week because they were not sure on what basis the mine was to be worked. The miners say that the company promised to operate the mine under the requirements of the

New York agreement, but the company, it is reported, wanted concessions, and after Mr. Bittner refused to grant them the suspension followed. At last reports the mine remained idle. The company operates several non-union mines along the Monongahela Ry.

A protest was entered with Governor Howard M. Gore over the presence of C. E. Lively, a mine guard who figured in the Sid Hatfield-Chambers episode in Mingo County. The miners alleged that he was in the employ of the Bethlehem Mines Corporation at Barrackville, but later stated that it was the Chesapeake mine of the Fairmont-Chicago Coal Co., of Fairmont, and closely allied with the Fairmont & Cleveland Coal Co. At the Governor's request Lively was relieved of duty at Rivesville and later in the Clarksburg field. Under the new law for issuance of pistol licenses, which will soon become effective, the Governor has the power to revoke licenses where he deems it in the interest of peace and policy. It is reported that the Governor's representative roundly scored Marion County officials for issuing a license to Lively.

Flemington Section Quiet

Quiet again reigns in the Flemington section, where it is said that a number of non-union coal operators have abandoned precautionary measures against mine depredations and have discharged the mine guards at some of the plants. Huge searchlights that have been in use for almost a year are being dimmed at Flemington, Rosemont and Simpson, but at Wendel, where the United Mine Workers have been picketing persistently for many months, the searchlights and guards are retained. Penitentiary sentences for three union miners and indictments pending against six others have been responsible for a general quieting down in that section. Delmar Mine No. 1, at Flemington, is being cleaned up and will work non-union within a short time.

According to reports from Wheeling, union miners at Mine No. 3 of the Paisley interests, at Elm Grove, and also at Lucy mine, across the river, in Ohio, quit July 15, due to an attempt to delay the periodical pay. The company stated that it had made large sales of coal on which it could not collect before July 20. Officials of the union advised the miners to return to work. It is reported that the miners have agreed to the plan, which is a nominal loan to the company, instead of forcing it to borrow money at 6 per cent to meet its payroll. It is said that this courtesy is being extended to Paisley interests in all of the union fields.

Federal authorities left Pittsburgh last week with Antonio Altipiede, a coal miner of Beckley, W. Va., whom they will deport from New York City to Italy as an undesirable alien. Better known as Tony Stafford, he served as



Main Shaft and Tippie, Mine No. 41, Barrackville, W. Va.

A view of the shaft of this mine of the Bethlehem Mines Corporation in which thirty-three men were killed in an explosion March 17, 1925. After a thorough investigation an inquest held at Fairmont, W. Va., July 16, failed to reveal the cause of the disaster.

international board member in District No. 29 at Beckley. He was convicted of dynamiting coal property of the E. E. White Coal Co. at Glen White in 1917, and had just completed serving five years in the West Virginia State Penitentiary at Moundsville.

Among developments in the pan-handle strike district last week was the action of Federal Judge W. E. Baker, at Elkins in sentencing Frank April, a striking employee of the West Virginia-Pittsburgh Coal Co., of Colliers, Brooke County, to serve six months in the Ohio County jail, on July 15, for contempt of court. He was accused of violating Judge Baker's injunction forbidding "peaceful persuasion."

By an agreement reached July 13, 149 union coal miners, many of whom are heads of families, will vacate houses of the West Virginia-Pittsburgh Coal Co. of Wellsburg, Brooke County. Attorneys for the coal company and the union miners came to an agreement to vacate if the men were given an additional 30 days. The miners will be housed in tents, according to William Roy, vice-president of the Ohio miners, who is in charge of the strike, and steps have been taken already to provide them. Joseph Angelio, international representative, will have charge of the miners vacating the properties. Judge J. B. Sommerville in circuit court congratulated both sides for waiving separate trials, which would have dragged out the hearings for a month or more.

Pearl Dooley, president of the Wellsburg local union of the United Mine Workers, is being held in the Brooke County jail without bond on a charge of conspiracy alleged to have been formed to blow up the Gilchrist mine of the West Virginia-Pittsburgh Coal Co. It is charged that he aided and abetted in the escape of the third of the alleged conspirators, George Johnson, brother of Jesse Johnson, a negro miner, who is charged with placing 165 sticks of dynamite in the generator and fan house of the mine, which was discovered by inspectors just before 140 employees went to work.

Trade Information Committee Named by N.C.A.

The National Coal Association has taken steps to function as a joint agency to collect trade information from the producing units of the bituminous coal industry and to disseminate this information in summarized form. C. E. Bockus, president of the Clinchfield Coal Corporation, Virginia, heads a special committee to define such a program for consideration of the directors. The other committee members are: J. G. Bradley, president, Elk River Coal & Lumber Co., Dundon, W. Va.; H. N. Taylor, president, United States Distributing Corp., New York City; W. J. Freeman, president, Bon Ayr Coal Co., Terre Haute, Ind.; T. W. Guthrie, president, Hillman Coal & Coke Co., Pittsburgh, Pa.

Other standing committees named by President Morton L. Gould are as follows:

Executive Committee—M. L. Gould (chairman), president, Linton Coal Co., Indianapolis, Ind.; Walter Barnum, president, Pacific Coast Co., New York City; C. E. Bockus, president, Clinchfield Coal Corp., New York City; Ira Clemens, vice-president, Clemens Coal Co., Pittsburgh, Kan.; W. H. Cunningham, president, Meriden Smokeless Coal Corp., Huntington, W. Va.; Michael Gallagher, general manager, M. A. Hanna Co., Cleveland, Ohio; Geo. B. Harrington, president, Chicago, Wilmington & Franklin Coal Co., Chicago; S. Pemberton Hutchinson, president, Westmoreland Coal Co., Philadelphia, Pa.; P. H. Penna, secretary, Indiana Bituminous Coal Operators Association, Terre Haute, Ind.; H. N. Taylor, president, U. S. Distributing Corp., New York City; R. C. Tway, president, R. C. Tway Coal Co., Louisville, Ky.

Finance—C. E. Bockus (chairman); S. Pemberton Hutchinson; F. W. Lukins, president, Farmers Fuel Co., Kansas City, Mo.; P. J. Quealy, president, Gunn-Quealy Coal Co., Kemmerer, Wyo.; S. H. Robbins, president, Youghiogheny & Ohio Coal Co., Cleveland, Ohio; S. L. Yerkes, vice-president, Grider Coal Sales Agency, Birmingham, Ala.

Foreign Trade—H. N. Taylor (chairman); C. W. Gibbs, secretary, Coal Operators Association of Thick Vein Freeport Seam of Pennsylvania, Harwick, Pa.; J. L. Good, sales manager, National Coal Co., Cleveland, Ohio; John Laing, president, Wyatt Coal Co., Charleston, W. Va.; R. D. Patterson, president, Weyanoke Coal & Coke Co., Lowe, W. Va.; J. W. Whatley, general manager of sales, DeBardeleben Coal Corp., Birmingham, Ala.

Government Relations—W. H. Cunningham (chairman), president, Meriden Smokeless Coal Corp., Huntington, W. Va.; H. F. Bovard, president, Keystone Coal & Coke Co., Greensburg, Pa.; A. W. Calloway, president, Davis Coal & Coke Co., Philadelphia, Pa.; Michael Gallagher; Sidney J. Jennings, vice-president, U. S. Smelting, Refining & Mining Co., New York City; J. E. Johnson, secretary, Hazard Coal Operators Exchange, Lexington, Ky.; J. J. Lincoln, general manager, Crozer Coal & Coke Co., Elkhorn, W. Va.; F. S. Love, president, Union Collieries Co., Pittsburgh, Pa.; A. J. Maloney, vice-president, Chicago, Wilmington & Franklin Coal Co., Chicago; J. B. Pauley, vice-president, J. K. Dering Coal Co., Chicago; J. G. Puterbaugh, president, McAlester Fuel Co., McAlester, Okla.; P. J. Quealy; R. H. Sherwood, president, Central Indiana Coal Co., Indianapolis, Ind.; D. B. Wentz, president, Stonega Coke & Coal Co., Philadelphia, Pa.; F. W. Wilshire, vice-president, Consolidation Coal Co., New York City.

Membership—S. Pemberton Hutchinson (chairman); Walter Barnum; Ira Clemens; C. C. Dickinson, president, Dry Branch Coal Co., Charleston, W. Va.; Geo. B. Harrington; F. S. Love; Ezra Van Horn, general manager, Clarkson Coal Mining Co., Cleveland, Ohio; F. P. Wright, general manager, Crescent Coal Co., Bevier, Ky.

Publicity—Geo. B. Harrington (chairman); D. B. Cornett, president, Cornett-Lewis Coal Co., Louisville, Ky.; Telford Lewis, general manager, Jasahill Coal Co., Johnstown, Pa.; L. C. Madeira, 3d, assistant to president, Madeira-Hill & Co., Philadelphia, Pa.; W. J. Sampson, president, Witch Hazel Coal Co., Youngstown, Ohio; P. M. Snyder, president, East Gulf Coal Co., Mt. Hope, W. Va.; W. E. Watson, president,

Virginian Plans Big Outlay For New Equipment

The Virginian Railway Co. has applied to the Interstate Commerce Commission for authority to obligate itself for the purchase of thirty-six electric locomotives to cost \$4,815,410. The locomotives are to be manufactured by the Westinghouse Electric & Manufacturing Co. and are to be of split-phase, constant-speed type of 11,000 or 22,000 volts.

The Norfolk & Western also has filed formal application for authority to lease the Virginian Ry. The purpose is stated as a desire for a western outlet, in connection with which it is proposed to construct fifty-three miles of line from Elmore to Gilbert and thence to Wharnciffe, W. Va. One of the economies which will be effected, it is stated, is the utilization by the Norfolk & Western of the excess power and electric locomotives of the Virginian company in connection with the electrification of a portion of its own lines.

Fairmont & Cleveland Coal Co., Fairmont, W. Va.

Research—Walter Barnum (chairman); Warren Blauvelt, president, Vigo Mining Co., Terre Haute, Ind.; J. G. Bradley; Thos. DeVenney, superintendent, Portsmouth By-Product Coke Co., Edgarton, W. Va.; Marshall J. H. Jones, vice-president, Bertha Consumers Co., Pittsburgh, Pa.; M. B. Lanier, president, Monro-Warrior Coal & Coke Co., Birmingham, Ala.; J. B. Pauley; E. L. Thrower, general manager, Warner Collieries Co., Cleveland, Ohio.

Safety—P. H. Penna (chairman); Thomas G. Fear, secretary, Inland Collieries Co., Indiana, Pa.; V. N. Hacker, president, Pruden Coal & Coke Co., Knoxville, Tenn.; Cadwalader Jones, vice-president, By-Products Coal Co., Wheelwright, Ky.; M. E. Kent, general manager, Cleveland Cliffs Iron Co., Ethel, W. Va.; W. L. Robinson, vice-president, Youghiogheny & Ohio Coal Co., Cleveland, Ohio; C. W. Taylor, vice-president, W. G. Duncan Coal Co., Greenville, Ky.; J. William Wetter, general manager, Madeira-Hill Coal Mining Co., Philadelphia, Pa.

Tax and Cost Accounting—R. C. Tway (chairman); H. C. Marchant, vice-president, Superior Rock Springs Coal Co., Ogden, Utah; Otis Mouser, vice-president, Stonega Coke & Coal Co., Big Stone Gap, Va.; W. P. Tams, Jr., president, Gulf Smokeless Coal Co., Tams, W. Va.; Geo. J. L. Wulff, president, Western Coal & Mining Co., St. Louis, Mo.; Paul Zimmerman, president, Zimmerman Coal Co., Terre Haute, Ind.

Transportation—Ira Clemens (chairman); W. L. Andrews, vice-president, Consolidation Coal Co., Baltimore, Md.; J. S. Brennan, secretary, Somerset County Coal Operators Association, Somerset, Pa.; Roy Carson, traffic manager, Harlan, Hazard & Southern Appalachian Coal Operators' Association, Louisville, Ky.; E. T. Evans, general manager, E. T. Evans Coal Co., Coalton, Ohio; T. F. Farrell, second vice-president, Pocahontas Fuel Co., Inc., New York City; C. A. Garland, traffic manager, Hillman Coal & Coke Co., Pittsburgh, Pa.; S. C. Higgins, secretary, New River Coal Operators Association, Mt. Hope, W. Va.; D. F. Hurd, secretary, Pittsburgh Vein Operators Association of Ohio, Cleveland, Ohio; C. H. Jenkins, vice-president, Hutchinson Coal Co., Fairmont, W. Va.; L. C. Madeira, 3d; E. C. Mahan, president, Southern Coal & Coke Co., Knoxville, Tenn.; A. J. Maloney; C. J. Neekamp, secretary, Northeast Kentucky Coal Association, Ashland, Ky.; J. B. Pauley; C. F. Richardson, president, West Kentucky Coal Co., Sturgis, Ky.; H. N. Taylor; Jonas Waffle, traffic manager, Indiana Bituminous Coal Operators Association, Terre Haute, Ind.; C. E. Warner, traffic manager, Southwestern Interstate Coal Operators Association, Kansas City, Mo.; H. T. Wilson, president, Red Jacket Consolidated Coal & Coke Co., Columbus, Ohio; A. R. Yarborough, traffic manager, Kanawha Coal Operators Association, Charleston, W. Va.

Government Still Hopes to Avert British Coal Strike

No apparent progress has been made in Great Britain toward a new coal agreement, but there are as yet no indications of a strike, according to cable advices to the Department of Commerce from Trade Commissioner C. E. Lyon, London. Separate meetings of the owners and miners, however, continue to be held. The miners have rejected the proposal of a renewed joint conference. The Miners' Federation has decided to meet in Paris on July 28 to consider joint international action if no settlement of the British situation has been reached by that time.

The government seems to be still hopeful of solving the crisis despite the mine workers' refusal to accept the proposed court of inquiry into their dispute with the mine owners. The court, it is believed, will be held whether the miners adhere to their refusal or reconsider their decision.

The government could legally demand their attendance, but such a step is altogether unlikely. The owners profess to be willing to attend the court, whether or not the miners do so.

The Ministry of Labor states that there is no possibility of a government subsidy, the present crisis being due to a general depression in the industry, making internal readjustment necessary, with both sides giving concessions. The coal situation continues to grow worse, 500 pits having been closed during the last 12 months. Unemployment reported on June 22 was 286,700 greater than a year ago. Unemployment in the coal industry accounts for much of the increase. The railway situation also is causing much concern. This problem is linked up with that of coal, as one of the tentative proposals for cutting coal prices to meet foreign competition is to reduce shipping costs. The railways, however, protest against such a reduction.

To Tap Huge Utah Field

It is announced that the Denver & Rio Grande Western R.R. will in the near future tap a coal field of 25,000 acres in Sevier County. Sons of the late Anthony H. Lund, member of the supreme presidency of the Mormon Church, own or hold option or federal lease upon the entire area. The first filings were made thirty years ago. In the 90s the D. & R. G. W. constructed a branch line up Salina Canyon with the intention of tapping this field. The branch was completed as far as Nioche. There are about 13,000 acres of patented ground and 12,000 acres under federal permit.

Where exposed the bed is from 15 to 20 ft. thick and above it is an overburden of several hundred feet of solid sandstone from which the coal parts smoothly. It is said that the coal has a clean facing which runs from top to bottom of the seam, the floor being smooth, consisting of a hard sandstone.

It is said the railroad will spend around \$1,000,000 on building the necessary branch line. An official of the road said the new branch line will leave the present main line at Salina and that it will be of broad-gauge.

Passing of Bulldozing Tactics in Wage Negotiations Gratifying to Washington Government Circles

Launching of Adequate Statistical Program by National Coal Association Likely to Take Edge Off Oddie Bill—Success Seen in Choice of Strong Committee

By Paul Wooton

Washington Correspondent of Coal Age

Washington is rather surprised at the absence of fireworks at the first meetings of the anthracite conferees at Atlantic City. It is realized, of course, that neither side takes very seriously the interchanges that have taken place thus far. Mr. Lewis' speech was a repetition of what he has said before under similar circumstances.

A distinct impression was made by the plea of S. D. Warriner. No more temperate or dignified utterance ever was made on either side of a wage controversy, many think. The attention given his speech in the daily press was unusual in view of the absence of sensational material. It probably will not make much of an impression on the United Mine Workers, but coming at the time when the public mind was in a formative state it is expected to win much support for that viewpoint.

The tolerant, tactful utterances of Mr. Warriner are in marked contrast with those of the late George F. Baer, who was one of the spokesmen for the industry in 1902, and is more nearly calculated to win public support.

An idea of the way an outsider sees the existing situation may be had from the writings of William Hard, who compares the Mine Workers to the children of Israel and the rock in the wilderness. The children of Israel did not question how the rock produced the water that flowed from it. In like fashion the Mine Workers have been smiting the coal industry. In the past all they have had to do was to smite hard enough and the reward for their effort was forthcoming. There are no indications that the Mine Workers at this time are particularly concerned as to the source of the rock's water. The picture drawn by Mr. Warriner of loss of markets to bituminous coal, to coke, to gas and to electricity seems not to impress them. They are not interested in making a good showing on economic grounds when their chances are so much better to win if the contest can be made political. Encouragement to that end is coming from Swampscott.

Adequate statistics for coal were brought measurably nearer when Secretary Gandy of the National Coal Association induced C. E. Bockus to head the committee which will formulate the program. Perusal of the list of members of the committee is all that is necessary to show how carefully it was chosen. If any men in the bituminous industry can induce the producers of coal to submit figures it is they, but even they are certain to be put on their mettle, especially if they recommend returns on costs, realizations and margins, to say nothing of wages and earnings—figures which

hardly could be expected from an organization part union and part non-union.

The strength of this committee is evidence of full appreciation that the association no longer can forego a leading part in a thoroughgoing statistical program. Congress and the public apparently believe that figures are essential to a diagnosis of the industry's ills. There is a suspicion that refuge has been taken behind alleged fears as to illegality. As such an excuse can be advanced no longer a showdown must come. If the industry will furnish adequate figures of its own, it will take punch out of the Oddie bill and make for a better situation if the Federal Trade Commission should win the Maynard suit.

The ideal statistical set-up would be to have vigorous local associations federated into a national organization which would be a clearing house for the figures and the principal broadcasting station for their dissemination to the public. This latter is regarded as essential to compliance with the interpretation of the law as to secret figures.

As there always will be some producers who will not want to deal with an association, it is recognized that it would be extremely difficult for the industry to gather its own production figures where 100 per cent returns are essential. It also would be necessary, it is believed, for the government to gather figures on stocks and consumption—information for which the producers hardly could ask.

Need More Expenditure Data

The industry, in addition to the financial statistics which many companies do not want to give, could report the amount of coal shipped on contract and the amount shipped on spot. Shipments by grades also would be helpful and there is a crying need for data as to how much coal mines pay in taxes to federal, state and local governments. With the coming of workmen's compensation, insurance has become a heavy item of cost. More data covering those expenditures are needed.

For many years a dozen or more manufacturing enterprises have increased their efficiency greatly by a system of comparative costs. Each plant reports detailed costs to a central clearing house. The cost of each operation is averaged and the average figures returned to each plant. The manufacturer then is able to spot those operations in his plant which are abnormally high. It directs scrutiny to the exact point where scrutiny is needed. While these comparative costs are not so readily applicable to mining

New Premier Moves to End Nova Scotia Strike

A move to adjudicate the strike of 12,000 miners employed in Cape Breton collieries of the British Empire Steel Corporation has been taken by the new Conservative Government in the arrangement of a conference between mine, labor and government officials. Premier E. N. Rhodes and Colonel Harrington, Minister of Public Works and Mines, went to Cape Breton July 20 to confer with company officials and leaders in the local district of the United Mine Workers. Coincident with the notice of the conference, announcement was made of an order to withdraw from Cape Breton 100 provincial police, who have been on duty in the strike area since the outbreak of rioting.

A resolution asking the new Premier-elect to insure the immediate resumption of mining operations and to extend financial relief to those now in want, to the end that "the calamity of starvation and disorders may be averted," was passed at a meeting at Sydney, July 9, of Mayors D. W. Morrison, of Glace Bay; P. G. Muise, of New Waterford; A. C. McCormick, Sydney Mines; J. L. McLean, of Dominion; Munroe, of Stellarton, and Wilson, of Springhill.

operations, something along that line can be resorted to profitably, it is believed. No question ever has been raised as to the legality of that type of statistical activity.

While the National Coal Association probably would not be the agency to do it, there is an increasing demand for statistics covering wages and earnings. Wage conferences in the future must be based on economic considerations. The days of bunk and bulldozing at such conferences are about to pass. The United Mine Workers already has recognized this and despite the depleted state of its treasury is spending a large amount of money in gathering these data. So far as is known no such figures are being gathered by the operators. Unless these figures are gathered they will be at a great disadvantage at the next wage conference.

D. & H. Stockholders to Vote On B. R. & P. Lease

A meeting of the stockholders of the Delaware & Hudson Co. has been called for Sept. 8 to vote on the proposed lease by the company of the Buffalo, Rochester & Pittsburgh Ry. Managers of the D. & H. approved the lease June 24 and the B., R. & P. directors May 1. The lease provides payment of rental sufficient to pay 6 per cent. annual dividends on the outstanding preferred and common stock and the fixed charges. In a letter to the Delaware & Hudson stockholders President Leonor F. Loree, who engineered the deal, says that he is "confident the terms of the lease are advantageous."

White and Pugh Appointed on Mines Bureau Committee

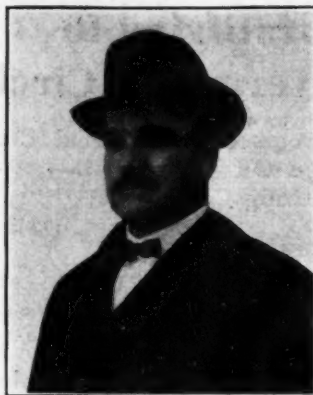
To comply with a request from J. Edgar Pugh, president of the American Petroleum Institute, it is probable that no meeting of the Bureau of Mines Advisory Committee will be held until the end of the month. Mr. Pugh has designated D. M. Folsom, of San Francisco, to represent the Petroleum Institute on the committee. He has asked particularly that sufficient time be given for him to come East to attend. As this is written, no call for a meeting of the committee has been issued, but it is expected that chairman Reyniers will comply with Mr. Pugh's request.

C. P. White, the coal specialist on Secretary Hoover's staff, will act as secretary to the advisory committee. The selection of Mr. White is regarded as having added materially to the strength of the committee. Mr. White is a retired coal operator who believes successful men have an obligation to the state which can be discharged by undertaking public service. His handling of the coal situation in the Northwest and arranging for Canadian supplies during the war is regarded as one of the most striking pieces of administrative generalship of that strenuous period. His acquaintanceship with industry and his ability as an organizer will stand the advisory committee in good stead, it is believed.

In addition to the naming of a member for the Petroleum Institute the Iron and Steel Institute has been asked to name a member. It is probable that the committee will be expanded further, as much pressure to that end already is being exerted. The difficulty in assembling a large committee with its membership drawn from different parts of the country makes it seem probable that much of the work will be done by a small subcommittee which can spend most of its time in Washington. It probably will be necessary to grant hearings to some interests who are not in accord with some phases of the Bureau's present work. Such a subcommittee would be able to reduce to their essentials all matters coming before the committee so that the committee itself could reach its decisions without undue consumption of time.

Will Urge Ford to Link D. T. & I. to Kentucky Road

Austin Fields, brother of Governor William J. Fields of Kentucky announced July 16 that he is going to appoint a committee of Grayson (Ky.) business men to consult Henry Ford with a view to interesting him in purchasing and extending the Eastern Kentucky R.R. and linking it to the Detroit, Toledo & Ironton R.R. The Eastern Kentucky, which extends thirty-six miles from Riverton through Grayson to Webbville in Lawrence County, now is in the hands of a receiver, and persistent rumors have been afloat that service on the line will be discontinued or that the line will be junked. Mr. Fields, as president of the Grayson Business Men's Club, has been authorized to act.



Seward E. Button

Connection of the Eastern Kentucky with the D., T. & I. would mean little mileage except for construction of a bridge across the Ohio River, because the terminus of Mr. Ford's railroad is Ironton, Ohio. Construction of approximately seven miles would add forty-three miles to the D., T. & I. with purchase of the Eastern Kentucky line.

From Webbville, it is proposed that Mr. Ford cross the remainder of Lawrence County, build through Johnson and Floyd, possibly touching the southeast end of Magoffin. From Floyd or Magoffin the tracks could run through Knott into Letcher and Leslie, opening Mr. Ford's coal field for the nation.

Mr. Ford holds coal lands in Leslie, Letcher, Bell, Pike, Harlan, Clay and Perry counties, all of which adjoin Knott or the counties in which Ford has mineral property. Accomplishment of this feat probably would require construction of less than 100 miles of railroad in Kentucky. As business required, the railroad could be branched from Letcher and Leslie into other counties.

Fist Fights Feature First Day of Convention of District 1; Reported Willingness to Cede Wage Demands Repudiated

Violence marked the first afternoon session of the biennial convention of District No. 1, United Mine Workers, which opened July 20 in Wilkes-Barre, Pa. George Isaacs, the defeated anti-administration candidate for district vice-president, was badly beaten. He had scalp wounds, a badly bruised eye and numerous body bruises when escorted from the hall. Other fist fights were stopped only after a score of city police had been summoned.

The fights came after Mayor Daniel L. Hart pleaded for peace in the ranks of the men.

William Brennan, defeated candidate for district president, attacked the report of the credentials committee, alleging that constitutional provisions relative to the framing of the delegate list had not been complied with, and that the report was signed by only one of the board of three auditors.

Secretary-Treasurer Enoch Williams, of Taylor, charged that Brennan had been instrumental in preventing the auditors doing their duty. Brennan

Button Resigns as Official In Five Coal Companies

Scranton, Pa., July 20.—F. H. Hemelright, president of the Temple Anthracite Coal Co., this afternoon announced the resignation of Seward E. Button as vice-president and general manager of the following coal companies: Temple Anthracite Coal Co., Temple Coal Co., Lackawanna Coal Co., Ltd., Mount Lookout Coal Co. and the East Bear Ridge Collieries Co. Mr. Button was named vice-president and general manager of the above named companies in February, 1924. Previous to that he was chief of the state Department of Mines of Pennsylvania.

Mr. Button entered the coal mining industry at the age of 15 years as a day laborer at the Hillside Colliery of the Hillside Coal & Iron Co. Fifteen years later he was made a mine foreman at the Hillside Colliery and later accepted a position as foreman at the Erie Colliery, in Jermyn. Later he went to the Temple Coal Co. as superintendent of the Mount Lookout Colliery, at Wyoming, afterward becoming district superintendent for the Temple company.

He was appointed chief of the Bureau of Mines by Governor Martin G. Brumbaugh on Feb. 9, 1918. He was reappointed by Governor William C. Sproul on Dec. 18, 1919, and retired from public service in 1923 to return to the Temple Coal Co. as general superintendent. His appointment as vice-president and general manager followed.

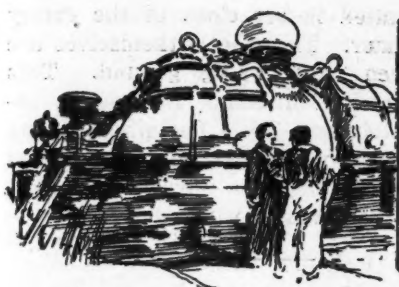
About six months ago a report was current that Mr. Button was to succeed Mr. Hemelright, who was said to be considering retirement due to his health. Mr. Button could not be reached today to learn of his plans for the future. The announcement by the president of the company did not give a reason for Mr. Button's resignation.

denied the accusation, and there were more fist fights.

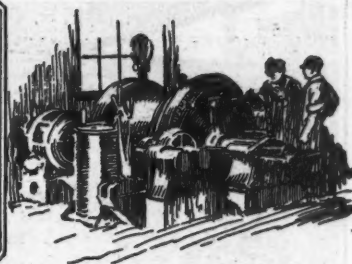
Then the administration applied steam-roller methods.

Thomas Kennedy, of Hazleton, international secretary-treasurer of the union, the final speaker of the afternoon, asked the men not to allow differences over district affairs to wreck their solid line-up on wage demands now being negotiated. The operators, he charged, are using propaganda instead of attacking the problems presented by the negotiations.

Relative to a report from Atlantic City that the men are willing to relinquish their demands for a wage advance rather than cause a strike on that issue, he asked the 600 delegates—fresh from the men in the mines and the real coal diggers, he called them—if that was the case. A loudly shouted "No" was the reply. Mr. Kennedy then asked the men at the press table to give that to the public and to S. D. Warriner and his propagandists as the reply of the men in the mines.



Practical Pointers For Electrical And Mechanical Men



Fire Teaches Coal Company to Build Shops in Separate Units

Some time ago the machine shop, electric shop, and storehouse of the Elkhorn Coal Corporation at Wayland, Ky. were destroyed by fire. This fire originated in the electric shop and quickly spread to the other departments which were under the same roof. The loss was heavy and the destruction of all mine supplies and spare parts, a great inconvenience.

To decrease the possibility of ever again losing all three departments by fire, the rebuilding was done as shown in the accompanying illustration. The three buildings which are of frame construction are separated by 40-ft. open spaces, and the adjacent ends covered with $\frac{1}{2}$ -in. asbestos board. A concrete walk 6 ft. wide connects the departments and serves as a runway for a portable floor crane. The open space between the electric shop and machine shop is used at odd times for a place to repair and store heavy or bulky equipment.

The three buildings are each 28 ft. in width. That to the left in the illustration, the storehouse, is 48 ft. long. The electric shop which is between the store house and machine shop, is 26 ft. long, and the machine shop 40 ft.

The Wayland shop does work for

all divisions of the Elkhorn Coal Corp. The shop is directly in charge of H. C. McGlone, chief electrician of the Wayland division, and indirectly under R. R. Schellinger, electrical engineer of the company.

Home-Made Wire Brush Cleans Conveyor

At the Lykens pulverized fuel power plant at the Short Mountain colliery near Lykens, Pa., the workmen at the coal storage plant had difficulty in preventing the wet fuel from sticking on the conveyor lines especially in winter. To overcome this trouble a piece of wire rope made of many strands of fine wire was opened up and located over the conveyor chain links.

The brush thus made rests lightly on the chains and prevents the coal from sticking and causing the conveyor to operate badly. This fuel is pumped from a nearby washery and breaker, it being so fine that it easily is suspended in the rapidly moving water. On the side of the hill near the power house the fuel is dewatered and placed in two large storage piles.

In winter the moisture in the fuel, even after it had been drained of water, caused the coal to freeze to

the conveyor links. Now the wire brush eliminates this difficulty.

Tipple Motor Starters Are Grouped Handily

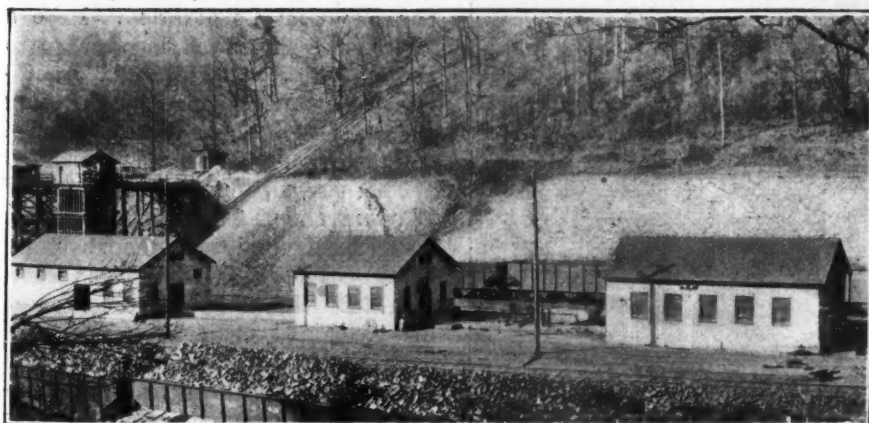
Some mine electricians still regard the automatic motor starter as a device to be used only where remote control is desirable. Often the automatic-type starter can be located in a more suitable place than a hand starter; the motors then can be started usually with less abuse; there is less burning of contacts and, therefore, the automatic starter gives less trouble and is cheaper to maintain. For these reasons some electrical men practically have discontinued buying manually operated starters, even for duty where remote control is not necessary.

An example of the use of automatic starters is illustrated in the photograph taken during the installation of shaker screens, picking tables and loading booms in the Caleb tippie of the Elkhorn Piney Coal Mining Co. at Weeksbury, Ky. Here all motors, except those on the boom hoists (which have built-in controllers), are controlled by automatic starters grouped in an accessible, well-lighted, and fairly clean part of the tippie.

An interesting feature of this installation, as explained by R. R. Webster, chief electrician, is the simplicity and lower installation cost afforded by a new-type, self-starting, induction motor. Of the two 15-hp. motors, one is the new type and the other a slip-ring motor. The only reason that both are not of the new type is that the older one had been purchased before the other was available.

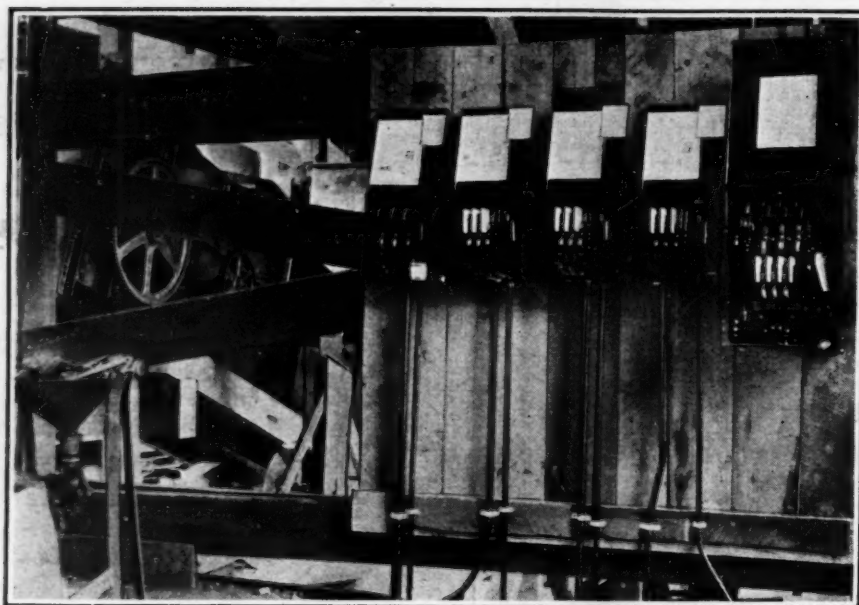
The large starter at the right in the illustration is that required for the 15-hp. motor. It has a resistance mounted back of the slate panel and is a rather heavy and expensive affair. With this type starter it is necessary to carry both rotor and stator leads from the motor to the panel.

As a comparison, the small starter



Wayland Shops Are Separate Now

These three buildings replaced the combination electric shop, machine shop, and storehouse which was destroyed by fire. As now located, with 40-ft. spaces between and with asbestos sheeting on the adjacent ends, it is unlikely that the three departments will ever again be destroyed by fire.



Starters Located Where They Are Easy to Get At

This picture was taken before the wiring was completed. The large starter is for controlling a 15-hp. slip-ring motor. Three sets of wires will have to be brought into this starter for the line, the stator leads, and the rotor connection. The small starter, mounted next to the large one, controls the same size motor but one of the new self-starting type.

next to it is all that is required for the 15-hp. self-starting motor. This is nothing more than a remotely controlled magnetic switch and has no connection to the rotor circuit of the motor. The other three small starters in the picture are those used with the 5-hp. motors operating the small conveyor and loading booms.

The new type of motor is not different in general appearance from an ordinary squirrel-cage induction

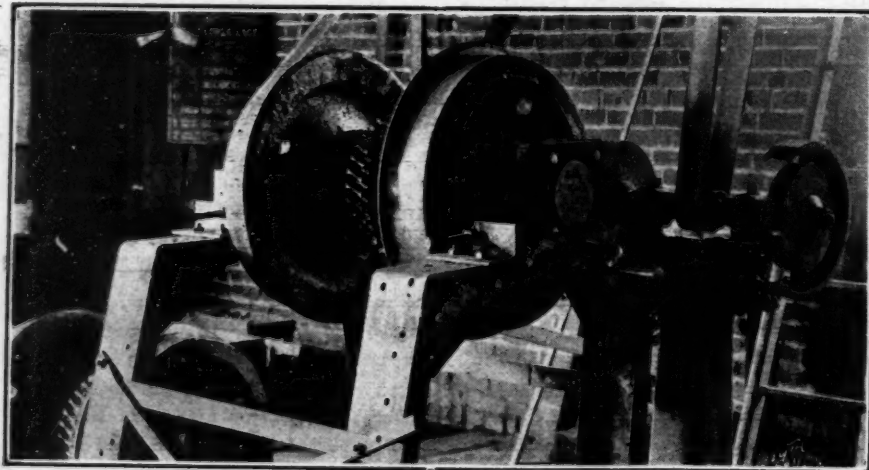
motor. High torque and low current starting characteristics are made possible by the use of a double squirrel-cage winding on the rotor. One winding is embedded in the bottom of deep slots. The starting winding is mechanically connected and disconnected. The action is governed automatically by the inherent change in the path of the magnetic flux as the motor approaches synchronous speed.

Home-Made Wheel Grinder Does Good Work

The accompanying illustration shows how the locomotive wheels of the Abbey Coal Corporation of Collinsville, Ill., are finished after the worn spots have been filled. In the building-up operation, the wheel

treads are filled with manganese steel. The metal is welded into place and all depressions are built up so that the wheel is as nearly a true circle as possible.

Before the wheels are again placed under the locomotive they are ground by an emery wheel. The frame on which the wheels are



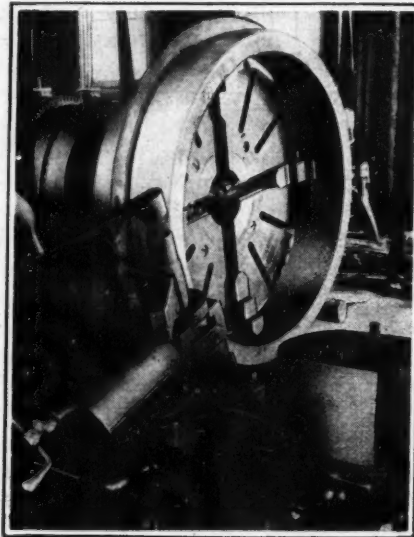
Grinding a Set of Wheels to a True Circle

After these wheels were built up with manganese steel they were mounted on a special frame and finished by an emery wheel.

mounted is set close to the emery grinder. The wheels themselves are driven while being ground. This method of finishing insures an absolutely true job. The wheels being finished when the photograph was taken belong to a narrow-gauge locomotive having a worm drive.

Inclined Tool Rest Raises Lathe Capacity

In many instances the lathe purchased for the mine shop is not large enough to accommodate locomotive tires. Many types can be blocked up, but if the swing is increased to any appreciable extent by this method, the carriage will be found to have sufficient travel to bring the tool post into the right position or turning large parts.

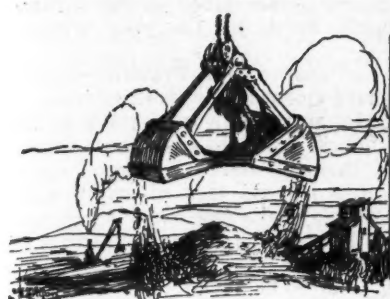


A 30-in. Tire in a 26-in. Machine Shop Lathe

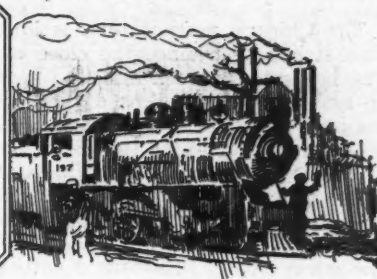
The compound rest has been moved from the center to a new position at the end of the carriage. The inclined support, which is of cast brass, makes this possible.

A way around this difficulty is illustrated in the photograph taken in the Wayland, Ky., shop of the Elkhorn Coal Corporation. Here a 26-in. lathe has been blocked up to swing 34-in. material, and an inclined support provided for bringing the tool post into the correct position for turning 30-in. tires.

The new support was made at the Wayland shop. Through necessity it was cast from brass, the shop not being equipped to make iron castings. On the bottom of the support are machined projections which fit into the grooves of the carriage. When tires are to be turned the compound rest is removed from its regular position in the center of the carriage and is bolted to the inclined block.



Production And the Market



Soft-Coal Market Develops Healthier Tone; Anthracite Trade Gains Gradually

Optimism is a little more prevalent in the soft-coal market. Perhaps the best feature of the improved sentiment is the fact that it seems to have a healthy basis quite apart from the threat of a hard-coal strike. Consumers apparently are beginning to be alive to the situation, with reserves far from large and prices low, and it is expected that demand will gain in momentum steadily from now on. No doubt news from the wage conference at Atlantic City will play its part in the market as already the threatened tie-up of British mines has stiffened the market at Hampton Roads.

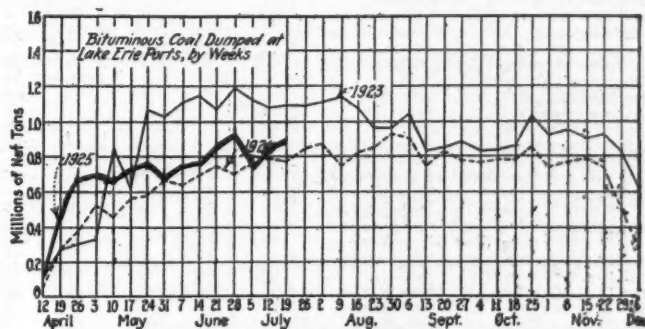
The Midwest market is showing more signs of life, and while the improvement has been largely on Eastern coals it is expected that Illinois and Indiana operators will soon share in the betterment. Demand is picking up steadily in Kentucky and prices are beginning to climb. The advance in prices is being accepted in a way that would seem to indicate that business is due to improve steadily. Eastern Kentucky screenings in particular are unusually firm for midsummer. Conditions are extremely dull at the head of the lakes, the iron mines having failed to open, as expected. The situation in the Southwest is somewhat firmer, a few mines in Kansas having reopened and several in Arkansas are preparing to resume. Trade is dragging in Colorado and Utah.

The Cincinnati market is somewhat complicated, embargoes on the B. & O. causing a backwash, with a slight softening of prices. Lake buyers, however, have come into the market instead of sellers having to go after them. Domestic demand continues to improve gradually in southern Ohio and the steam trade remains about normal. A slightly better tone is in evidence in eastern Ohio, though steam buying is largely limited to current needs. The Pittsburgh market is stagnant.

New England, New York and the other Eastern markets bear a somewhat healthier aspect, soft spots being less in evidence.

A gradual increase in demand accompanied by greater firmness of independent prices marks the anthracite trade, though the gain has not been as great as was expected.

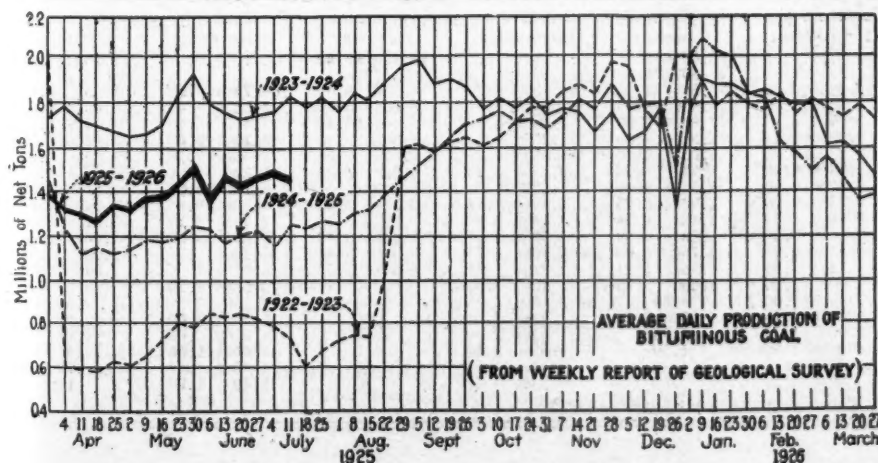
Bituminous coal output in the week ended July 11 is estimated by the Geological Survey at 8,631,000 net tons, compared with 7,352,000 tons in the holiday week,



preceding. Anthracite production in the week ended July 11 was 1,854,000 net tons, compared with 1,514,000 tons in the week ended July 4.

Coal Age Index of spot prices of bituminous coal showed no change during the past week, standing on July 20 at 160, the corresponding price being \$1.93.

Dumpings at Lake Erie ports during the week ended July 19, according to the Ore & Coal Exchange, were: Cargo, 831,252 net tons; steamship fuel, 50,131 tons—a total of 881,383 net tons, compared with 831,890 tons in the preceding week. Hampton Roads dumpings in the week ended July 16 totaled 351,037 net tons, compared with 468,804 tons in the previous week.



Estimates of Production

(Net Tons)

BITUMINOUS

	1924	1925
June 27.....	7,608,000	8,662,000
July 4 (a).....	5,913,000	7,352,000
July 11 (b).....	7,742,000	8,631,000
Daily average.....	1,290,000	1,438,000
Cal. yr. to date.....	243,427,000	247,763,000
Daily av. to date..... (c)	1,503,000	1,528,000

ANTHRACITE

June 27.....	1,918,000	1,844,000
July 4.....	1,296,000	1,514,000
July 11.....	1,871,000	1,854,000
Cal. yr. to date..... (c)	48,312,000	47,803,000

COKE

July 4(a).....	94,000	120,000
July 11 (b).....	106,000	126,000
Cal. yr. to date..... (c)	6,204,000	5,477,000
(a) Revised since last report. (b) Subject to revision. (c) Minus two days' production to equalize number of days in the two years.		

Midwest Trade Shows Signs of Life

The Chicago market tone is infinitely more encouraging than it has been since the close of the winter season. As was intimated a week ago, the market is beginning to pick up and show some signs of life. Most of the activity and the improvements to date have been on Eastern coals, but it is confidently expected that better conditions are in prospect in the near future for the Illinois and Indiana operators.

Relative to improved conditions in the East, a number of the smokeless operators represented in Chicago have been forced to withdraw all prices temporarily on high-grade smokeless coals. Eastern Kentucky and splint operators have raised their quotations from 10c. to 25c. a ton. Low-price contracts on smokeless mine-run offered to dealers and not accepted to date have been withdrawn and a new set of figures showing a considerable advance submitted in their place.

Franklin County and Saline County operators report a little better business on domestic coals, which also is true of Indiana Fourth Vein operators in the Clinton and Linton districts. Steam coals are erratic and there is a wide variance in quotations on screenings from the same field, principally because some operators are in good shape and others not so good. Renewed interest in contracts is being shown by industrial consumers, with some operators holding back,

going on the basis that having gotten along so far without contracts they can probably finish up the year without them.

There is a little activity in spots in the Franklin County field—a couple of mines have opened, but working time is not good. There seems to be heavy railroad buying in the last ten days from this field and from the deep-shaft mines. This has enabled some of them to make some good showings. On good authority it is learned that a few Western railroads are putting in storage coal. One road is reported as considering a storage pile of 100,000 tons for July and the early part of August. This is helping the situation in the Williamson and Franklin County field and to some extent is helping the Harrisburg field.

There has been a little pickup in domestic movement of lump and egg, which indicates that from now on an improvement can be looked for steadily.

Steam is fairly active in screenings but slowing up in the nut sizes. Strip mines are making good working time on both steam and domestic, and all mines still continue to do some crushing. Working time at the shaft mines still runs from one to three days a week, with the usual exceptions. Conditions show no improvement in the Duquoin field. One and two days a week, with one mine getting three days, is the rule, but the strip mines show good working time and stripping developments in this section promise to increase.

Current Quotations—Spot Prices, Bituminous Coal—Net Tons, F.O.B. Mines

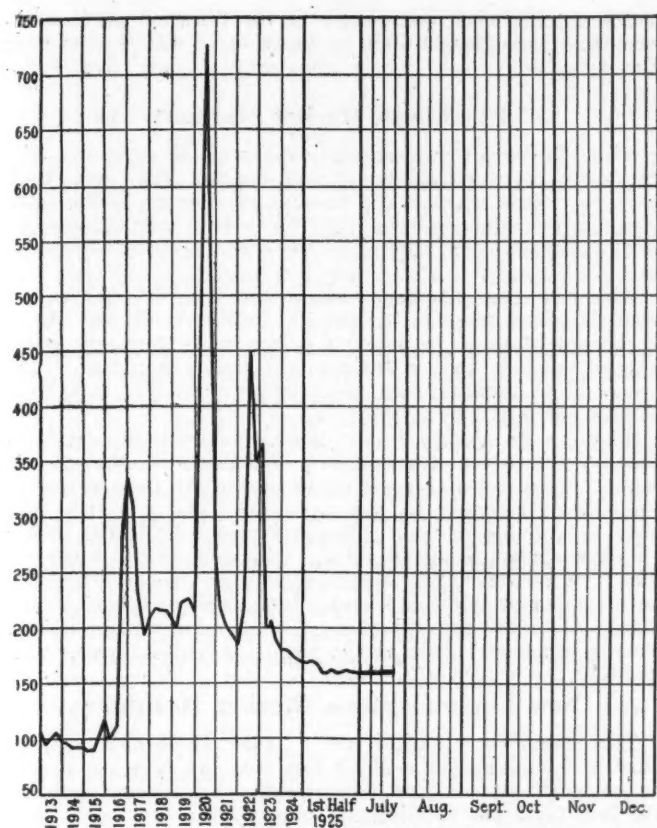
Low-Volatile, Eastern		Market Quoted	July 21 1924	July 6 1925	July 13 1925	July 20 1925†	Midwest		Market Quoted	July 21 1924	July 6 1925	July 13 1925	July 20 1925†
Smokeless lump.....	Columbus....	\$3.85	\$2.85	\$2.85	\$2.75@	\$3.00	Franklin, Ill. lump.....	Chicago.....	\$2.85	\$2.60	\$2.60	\$2.50@	\$2.75
Smokeless mine run.....	Columbus....	2.20	1.85	1.85	1.75@	2.00	Franklin, Ill. mine run.....	Chicago.....	2.35	2.35	2.35	2.25@	2.50
Smokeless screenings.....	Columbus....	1.30	1.30	1.30	1.25@	1.50	Franklin, Ill. screenings.....	Chicago.....	1.70	2.00	2.00	1.75@	2.25
Smokeless lump.....	Chicago.....	3.85	3.10	3.10	3.00@	3.25	Central Ill. lump.....	Chicago.....	2.50	2.35	2.35	2.25@	2.50
Smokeless mine run.....	Chicago.....	1.85	1.85	1.85	1.75@	2.10	Central Ill. mine run.....	Chicago.....	2.10	2.10	2.10	2.00@	2.25
Smokeless lump.....	Cincinnati.....	3.75	2.85	2.85	2.85@	3.00	Central Ill. screenings.....	Chicago.....	1.60	1.75	1.75	1.50@	1.90
Smokeless mine run.....	Cincinnati.....	1.80	1.95	2.00	2.00		Ind. 4th Vein lump.....	Chicago.....	2.60	2.60	2.60	2.50@	2.75
Smokeless screenings.....	Cincinnati.....	1.35	1.30	1.25	1.25@	1.30	Ind. 4th Vein mine run.....	Chicago.....	2.35	2.35	2.35	2.25@	2.50
*Smokeless mine run.....	Boston.....	4.30	4.20	4.25	4.25@	4.35	Ind. 4th Vein screenings.....	Chicago.....	1.70	1.80	1.80	1.65@	2.00
Clearfield mine run.....	Boston.....	1.85	1.80	1.80	1.65@	1.90	Ind. 5th Vein lump.....	Chicago.....	2.35	2.25	2.25	2.15@	2.40
Cambria mine run.....	Boston.....	2.15	2.05	2.00	1.85@	2.10	Ind. 5th Vein mine run.....	Chicago.....	2.10	1.95	1.95	1.85@	2.10
Somerset mine run.....	Boston.....	2.00	1.90	1.85	1.75@	2.00	Ind. 5th Vein screenings.....	Chicago.....	1.55	1.50	1.50	1.40@	1.60
Pool 1 (Navy Standard).....	New York.....	2.70	2.55	2.55	2.40@	2.70	Mt. Olive lump.....	St. Louis.....	2.85	2.50	2.50	2.50	
Pool 1 (Navy Standard).....	Philadelphia.....	2.80	2.60	2.60	2.45@	2.75	Mt. Olive mine run.....	St. Louis.....	2.50	2.25	2.25	2.25	
Pool 1 (Navy Standard).....	Baltimore.....		1.85	1.85	1.80@	1.95	Mt. Olive screenings.....	St. Louis.....	2.00	1.75	1.75	1.75	
Pool 9 (Super. Low Vol.).....	New York.....	2.05	2.00	2.00	1.80@	2.15	Standard lump.....	St. Louis.....	2.15	2.25	2.25	2.25	
Pool 9 (Super. Low Vol.).....	Philadelphia.....	2.15	2.00	2.00	1.85@	2.20	Standard mine run.....	St. Louis.....	1.80	1.80	1.80	1.75@	1.90
Pool 9 (Super. Low Vol.).....	Baltimore.....	1.90	1.75	1.75	1.65@	1.85	Standard screenings.....	St. Louis.....	1.45	1.50	1.50	1.25@	1.40
Pool 10 (H.Gr. Low Vol.).....	New York.....	1.80	1.85	1.80	1.75@	1.90	West Ky. block†.....	Louisville.....	2.10	1.35	1.40	1.50@	1.65
Pool 10 (H.Gr. Low Vol.).....	Philadelphia.....	1.75	1.70	1.70	1.60@	1.85	West Ky. mine run.....	Louisville.....	1.60	1.10	1.25	1.10@	1.25
Pool 10 (H.Gr. Low Vol.).....	Baltimore.....	1.70	1.60	1.60	1.55@	1.65	West Ky. screenings.....	Louisville.....	1.25	1.10	1.00	.80@	.95
Pool 11 (Low Vol.).....	New York.....	1.55	1.60	1.55	1.50@	1.65	West Ky. block†.....	Chicago.....	2.05	2.00	2.00	1.60@	2.25
Pool 11 (Low Vol.).....	Philadelphia.....	1.45	1.55	1.55	1.50@	1.60	West Ky. mine run.....	Chicago.....	1.60	1.35	1.35	1.15@	1.60
Pool 11 (Low Vol.).....	Baltimore.....	1.55	1.40	1.40	1.35@	1.45							
High-Volatile, Eastern							South and Southwest						
Pool 54-64 (Gas and St.).....	New York.....	1.50	1.50	1.50	1.40@	1.65	Big Seam lump.....	Birmingham.....	3.20	2.00	2.00	1.80@	2.25
Pool 54-64 (Gas and St.).....	Philadelphia.....	1.50	1.50	1.50	1.45@	1.60	Big Seam mine run.....	Birmingham.....	1.75	1.75	1.75	1.50@	2.00
Pool 54-64 (Gas and St.).....	Baltimore.....	1.45	1.35	1.35	1.30@	1.45	Big Seam (washed).....	Birmingham.....	2.00	1.85	1.85	1.75@	2.00
Pittsburgh so'd gas.....	Pittsburgh.....	2.40	2.40	2.40	2.30@	2.50	S. E. Ky. block†.....	Chicago.....	2.10	2.45	2.45	2.45@	2.65
Pittsburgh gas mine run.....	Pittsburgh.....	2.10	2.15	2.15	2.10@	2.25	S. E. Ky. mine run.....	Chicago.....	1.50	1.70	1.70	1.60@	1.85
Pittsburgh mine run (St.).....	Pittsburgh.....	1.85	1.95	1.95	1.90@	2.00	S. E. Ky. block†.....	Louisville.....	2.10	2.10	2.25	2.00@	2.50
Pittsburgh slack (Gas).....	Pittsburgh.....	1.25	1.50	1.50	1.40@	1.60	S. E. Ky. mine run.....	Louisville.....	1.55	1.55	1.40	1.35@	1.75
Kanawha lump.....	Columbus.....	2.10	1.85	1.85	1.75@	2.00	S. E. Ky. screenings.....	Louisville.....	.95	1.10	1.05	1.00@	1.25
Kanawha mine run.....	Columbus.....	1.45	1.40	1.40	1.35@	1.50	S. E. Ky. block†.....	Cincinnati.....	2.50	2.25	2.35	2.00@	2.50
Kanawha screenings.....	Cincinnati.....	1.00	1.15	1.15	1.10@	1.25	S. E. Ky. mine run.....	Cincinnati.....	1.45	1.55	1.35	1.25@	1.60
W. Va. lump.....	Cincinnati.....	2.10	2.25	2.25	2.00@	2.50	S. E. Ky. screenings.....	Cincinnati.....	.90	1.15	1.10	1.00@	1.25
W. Va. gas mine run.....	Cincinnati.....	1.35	1.55	1.40	1.40@	1.50	Kansas lump.....	Kansas City.....	4.50	4.00	4.00	4.00	
W. Va. steam mine run.....	Cincinnati.....	1.35	1.40	1.30	1.25@	1.40	Kansas mine run.....	Kansas City.....	3.50	3.00	3.00	3.00	
W. Va. screenings.....	Cincinnati.....	.95	1.15	1.10	1.10@	1.15	Kansas screenings.....	Kansas City.....	2.50	2.50	2.50	2.50	
Hocking lump.....	Columbus.....	2.45	2.15	2.15	2.00@	2.30							
Hocking mine run.....	Columbus.....	1.70	1.50	1.50	1.40@	1.65							
Hocking screenings.....	Columbus.....	1.15	1.30	1.30	1.25@	1.40							
Pitts. No. 8 lump.....	Cleveland.....	2.40	2.20	2.20	1.90@	2.50							
Pitts. No. 8 mine run.....	Cleveland.....	1.80	1.80	1.85	1.80@	1.90							
Pitts. No. 8 screenings.....	Cleveland.....	1.00	1.40	1.45	1.45@	1.55							

* Gross tons, f.o.b. vessel, Hampton Roads.
† Advances over previous week shown in heavy type; declines in italics.
‡ The term block is used instead of lump in order to conform to local practice, but the same coal is being quoted as heretofore.

Current Quotations—Spot Prices, Anthracite—Gross Tons, F.O.B. Mines

Market Quoted		Freight Rates	July 21, 1924		July 13, 1925		July 20, 1925†	
			Independent	Company	Independent	Company	Independent	Company
Broken.	New York.	\$2.34		\$8.00@8.95		\$8.15@8.80		\$8.15@8.80
Broken.	Philadelphia.	2.39		8.80@ 8.95		8.70		8.70
Egg.	New York.	2.34	\$8.50@9.00	8.55@ 8.95	\$8.60@ 8.75	8.55@ 8.80	\$8.75@9.00	8.55@ 8.80
Egg.	Philadelphia.	2.39	8.90@ 9.60	8.90@ 8.95	8.80@ 9.40	8.60@ 8.80	8.80@ 9.40	8.60@ 8.80
Egg.	Chicago*.	5.06	7.99@ 8.10	7.94@ 8.00	7.86@ 8.50	7.54@ 8.28	7.86@ 8.50	7.54@ 8.28
Stove.	New York.	2.34	9.00@ 9.25	8.55@ 9.20	9.00@ 9.35	9.05@ 9.30	9.10@ 9.40	9.05@ 9.30
Stove.	Philadelphia.	2.39	9.25@ 9.90	8.95@ 9.10	9.40@ 9.75	9.05@ 9.20	9.40@ 9.75	9.05@ 9.20
Stove.	Chicago*.	5.06	8.30@ 8.40	8.24@ 8.34	8.22@ 8.70	8.02@ 8.20	8.22@ 8.70	8.02@ 8.20
Chestnut.	New York.	2.34	8.50@ 9.00	8.55@ 9.05	8.25@ 8.60	8.55@ 8.80	8.75@ 9.00	8.55@ 8.80
Chestnut.	Philadelphia.	2.39	8.75@ 9.70	8.90@ 8.95	8.80@ 9.65	8.70@ 8.80	8.80@ 9.65	8.70@ 8.80
Chestnut.	Chicago*.	5.06	8.08@ 8.23	8.18@ 8.24	8.14@ 8.35	7.79@ 8.10	8.14@ 8.35	7.79@ 8.10
Pea.	New York.	2.22	4.50@ 5.25	5.50@ 6.00	5.00@ 5.50	5.00@ 5.80	5.25@ 5.50	5.00@ 5.80
Pea.	Philadelphia.	2.14	5.75@ 6.25	5.75@ 6.00	5.50@ 5.75	5.50@ 5.40	5.50@ 5.75	5.00@ 5.40
Pea.	Chicago*.	4.79	5.13@ 5.45	5.36@ 5.91	4.91@ 5.36	4.69@ 5.00	4.91@ 5.36	4.69@ 5.00
Buckwheat No. 1.	New York.	2.22	2.00@ 2.50	3.00@ 3.15	2.00@ 2.50	2.50	2.00@ 2.50	2.50
Buckwheat No 1.	Philadelphia.	2.14	2.50@ 3.00	3.00	2.15@ 2.75	2.50	2.15@ 2.75	2.50
Rice.	New York.	2.22	1.50@ 2.15	2.00@ 2.25	1.75@ 2.00	2.00	1.90@ 2.00	2.00
Rice.	Philadelphia.	2.14	2.00@ 2.25	2.25	1.85@ 2.00	2.00	1.85@ 2.00	2.00
Barley.	New York.	2.22	1.00@ 1.50	1.50	1.35@ 1.50	1.50	1.40@ 1.50	1.50
Barley.	Philadelphia.	2.14	1.50	1.50	1.40@ 1.50	1.50	1.40@ 1.50	1.50
Birdseye.	New York.	2.22	1.00@ 1.50	1.60	1.35@ 1.60	1.60	1.40@ 1.60	1.60

* Net tons, f.o.b. mines. † Advances over previous week shown in heavy type; declines in italics.



Coal Age Index of Spot Prices of Bituminous Coal F.O.B. Mines

Index	1925		1924	
	July 20	July 13	July 6	July 21
Weighted averaged price	160	160	160	163
	\$1.93	\$1.93	\$1.94	\$1.98

This diagram shows the relative, not the actual, prices on fourteen coals, representative of nearly 90 per cent of the bituminous output of the United States, weighted first with respect to the proportions each of slack, prepared and run-of-mine normally shipped, and, second, with respect to the tonnage of each normally produced. The average thus obtained was compared with the average for the twelve months ended June, 1914, as 100, after the manner adopted in the report on "Prices of Coal and Coke; 1913-1918," published by the Geological Survey and the War Industries Board.

In the Mount Olive field conditions are still bad. A little tonnage is moving, for steam principally, and one or two days a week is considered good working time. A little railroad tonnage also moves.

In the Standard field there is little improvement. The movement of early storage for St. Louis did not develop as was expected; all mines have "no bills" on hand, and domestic sizes are hard to move. Railroad tonnage is high and one and two days a week is good working time. Prices are unchanged.

At St. Louis there is a little activity in early storage of southern Illinois high-grade coal, but other than that, retail conditions are slow. Apartment-house early storage is not developing fast for Standard coal, and Mount Olive seems to be at a standstill. There is no activity in anthracite or smokeless and very little in coke. Wagonload steam is slow, and carload is active for screenings only in a fair way. Country domestic in spots shows improvement, but country steam is slow.

Demand Improves Steadily in Kentucky

A much better spirit is prevalent in the Kentucky coal trade than at any previous time in months. Demand is improving steadily and prices are starting to advance. Buyers are taking to increased prices a little better than had been anticipated, and it is believed that business will steadily improve.

In western Kentucky prices have started advancing on prepared, but screenings are a bit weaker as a result of larger production. In eastern Kentucky block is a trifle stronger, while all other sizes are firm. Movement is generally better, however.

Western Kentucky is now quoting block at \$1.50@1.65, with some prime 6-in. at \$1.75; lump, egg and nut, \$1.40@1.60; mine-run, \$1.10@1.25, and screenings, 80@95c.

Eastern Kentucky is selling some block at \$2, but prices are closer to \$2.25@2.50, with some fine grades even higher. Lump and egg are \$1.75@2.10; nut, \$1.50@1.75; mine-run, \$1.35@1.75, and screenings, \$1@1.25.

A feature of the market is the firm price on eastern Kentucky screenings, at \$1 and up, which is unusual for mid-summer, but made possible by a good general industrial, utility and steam demand, as well as a larger movement than usual to the lakes for bunkering use.

Faint Signs of Life in Northwest

The situation is still very dull at Duluth as far as shipments from the docks go. A little more anthracite moved last week than before, however, and there seemed to be some sign of life in the bituminous industry. The unexpected move of anthracite probably is due to the big consumers, who burn hard coal regardless of price, filling their bins for the year, and in some instances the small man's fear of a curtailment of the supply.

Coal men say, however, that unless there is a material reduction in the price of hard coal, more Pocahontas will be burned this year than ever before. The spread in price between the poorest hard coal and Pocahontas is more than \$5 a ton, delivered.

Forty-nine cargoes arrived last week, which was an improvement over the week before. Of these, only three were hard coal, showing that the docks are leary of putting in too big a supply of anthracite. There are 14 cargoes on the way, of which three are hard coal.

Mines on the range are proving a disappointment, as they are not opening up. Prices remain the same all through the list, with no signs of weakening.

Both dock managers and retail dealers in Milwaukee reported a better demand for coal last week. Householders evidently have been moved to action by talk of a possible strike in the anthracite region in September, as the temperature has been high enough thus far during July to keep them serene as to fuel requirements. But the bins must have filling in a few weeks, and the activity now noted is the forerunner of a steady demand that will draw heavily upon dock supplies. Cargoes are coming to Milwaukee quite steadily. Receipts during July, up to the 16th, aggregate 216,766 tons—45,100 tons of anthracite and 171,666 tons of bituminous coal. This carries the total for the year thus far to 1,333,139 tons, against 1,118,381 tons during the same time in the season of 1924.

Firmer Tendency in Southwest

The Southwestern market is becoming firmer. Dealers are beginning to buy in small quantities, though the principal demand continues to be for school storage and threshing. Some operators are preparing to reopen their Arkansas mines, where now there is little activity. Several small mines have been reopened in Kansas in recent weeks, though a market sufficient to warrant a general resumption of work is not expected now before late in August.

There is very little change, if any, in the coal conditions in Colorado. Mines are operating about two days a week, demand for domestic coal being virtually nil, as dealers are holding off orders until the new rates become effective.

The coal business continues draggy in Utah. Orders from industrials are no better than they were and the hot weather has reduced domestic consumption to practically nil. Coal for storage purposes is moving slower than normal. Prices are as steady as ever. Prominent retail concerns are issuing circular matter urging the public to store coal now for winter use. These circulars predict an advance in coal prices in the fall. Prices have not been changed here since last September, when there was an adjustment following the granting of storage rates. There is little contracting and business is quiet all over the territory served.

Embargoes Bring Softness at Cincinnati

Embargoes by the Baltimore & Ohio against coal moving from south of the river to Toledo caused a slight backwash at Cincinnati that was felt principally by shippers and handlers of mine-run during the past week. This caused a little softening, and those with a Chesapeake & Ohio outlet turned their offerings to tide. On the other hand, lake buyers, probably for the first time this season, came to the market instead of sellers going to them, and this is always a healthy sign.

In the bituminous line-up lump and block still lacked

activity. The mid-month price advance by some of the Logan County (W. Va.) producers added a better tone, inquiries too were better, but quite an amount of tonnage still could be picked up around \$2 in spite of the fact that \$2.25 was asked and \$2.40 was sought by some southeastern Kentucky shippers. Egg and 2-in. are unchanged, and slack, in spite of the softening of mine-run, stood at the old figures.

Smokeless coals are firmer in price than for the past couple of weeks. Some direct-sales offices are making a determined effort to get \$3 for lump, though a distinction is still made against egg. Some mines ask \$2.85 for egg, a 10c. advance, and mine-run is firm at \$2 with little of the standard offerings below that mark. Screenings have had a better inquiry, but the price is practically unchanged.

There has been no change in the retail situation, though an advance Aug. 1 seems certain. If this happens it will be the first upward change since last March.

Recent rains have given the river a good stage and assurance of decent depth for some time to come.

The gradual improvement in the domestic demand in Columbus and central Ohio continues. Retailers in many sections are placing better orders in view of the fact that more householders are coming into the market. Rural dealers are buying in order to take care of the threshing business, which, however is not nearly as important as formerly. Retail prices have stiffened to a certain extent with smokeless, splints and Kentucky block the favorite varieties.

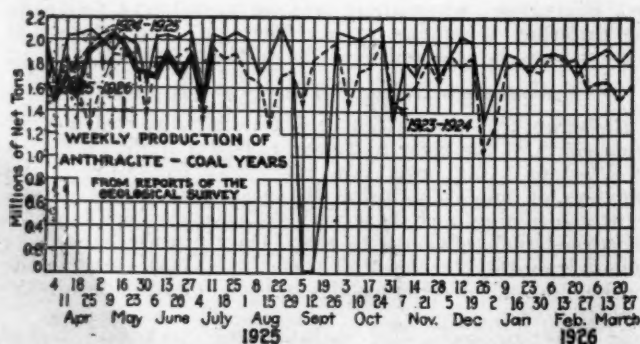
Steam business is running along about as usual, with some larger orders coming in where reserves are unusually low. But contracting has not been increased although some of the larger users are making inquiries on large tonnage. Railroads and utilities are the best steam buyers. Manufacturing concerns have not been able to increase their operations and are playing safe on the fuel proposition. The market has been kept fairly clean because of buying by general steam users and there is little distress coal reported on the Columbus market. Open-market buying is still the rule among larger users. Screenings are still firm, largely through the curtailment of lump output. The tone of the steam trade has improved materially during the past two weeks and producers as well as distributors believe that better things are in store during the latter part of July and in August.

The lake movement continues steady with some of the tonnage coming from Ohio mines, especially those working under the 1917 scale. Lake contracting is slow, however, as most of the shippers have placed their contracts for the season.

Production in the southern Ohio field shows little increase and is estimated from 20 to 25 per cent of capacity. Some trouble is reported following agitation on the part of union officials in sections where co-operative mining is prevalent. A few more mines are opening with the 1917 scale as a wage basis.

Improved Tone in Eastern Ohio

In eastern Ohio last week saw a stronger demand for slack and nut-and-slack, with an enhancement in spot prices of 5 to 10c. per ton. Spot prices on other grades show practically no change. The market manifests a slightly improved tone, however; retailers are beginning to purchase and store for fall trade and inquiries from steam consumers are more active. The major portion of the steam trade nevertheless is adhering to small-quantity purchases for current use.



During the week ended July 11 the total output in eastern Ohio was 226,000 tons, an increase of 43,000 tons over the preceding week, which consisted of only five work-days.

Pittsburgh Market Stagnant

The Pittsburgh market continues as dull as ever. The movement between operators and regular customers, such as it is, keeps up, but the amount of inquiry in the open market for mine-run and lump is almost negligible. As usual, there is some trading in slack and there is occasional inquiry for nut.

There is room for hopes of improvement in the general coal situation, but the Pittsburgh district is so far out of the competition as to meeting prices in its formerly widespread markets that a little improvement would do it no good. For months past the district's market has been almost entirely a local affair.

There is no change in the bituminous situation at Buffalo. Prices are at the bottom and will remain there for a while at any rate. Shippers are pleased if they can grab up enough business to pay expenses. Many assert that they are unable to do it. Quotations are \$1.60@\$1.75 for Fairmont lump, \$1.40@\$1.50 for mine-run, \$1.25@\$1.40 for slack; \$2.25@\$2.50 for Youghiogheny gas lump, \$2@\$2.25 for Pittsburgh and No. 8 steam lump, and \$1.40@\$1.60 for slack; \$1.75@\$2 for Allegheny Valley mine-run. Cambria County smokeless sells at the curb, for house furnace use, at \$6.

New England Steam Market Healthier

The steam coal market has a more wholesome appearance in New England. Much less tonnage is being forced on reluctant buyers and enough sales have been made in the last fortnight to eliminate most of the soft spots that were typical when July came in. Receipts continue on a light weekly basis, but the trade is more hopeful and there is an inclination now to be deliberate about futures. Coal is still being sold for September delivery at today's quotations for spot shipment, but the range of prices is at least 5@10c. higher than a week ago. A few orders that have come into the market in the past week were taken at better prices than had obtained for several weeks, and unless some group of smokeless operators make overshipments here there is reason to think the market is already on a sounder footing than has been the case for many a day.

It is doubtful whether there will be any marked response on the part of buyers; so many favorable predictions have been made in the past three years that most of them will be very slow in reacting. At the same time there is quite an aggregate tonnage to be placed before November, and all these conditions in the steam coal trade will call for careful handling in the next few weeks.

Accumulations at Hampton Roads did not bulk so large last week, and admittedly there is a better feeling among the agencies. The British labor situation has been a source of some encouragement, although no tangible results have as yet appeared.

Pocahontas and New River of the higher grades are being held at \$4.25@\$4.35 per gross ton, f.o.b. vessel, with slack commanding close to \$4 at the same ports. On cars Boston there have been sales recently at \$5.35@\$5.40, although for 1,000-ton lots a discreet buyer could doubtless cover at \$5.25@\$5.35.

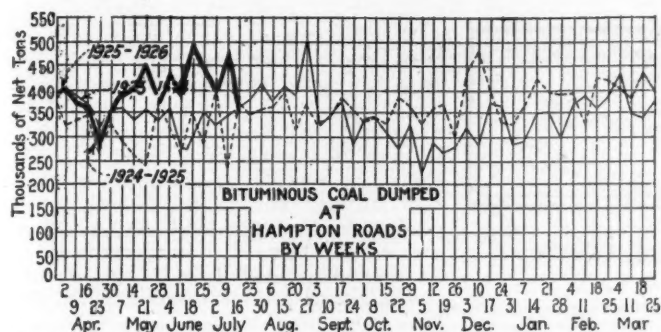
In Pennsylvania coals all-rail there is next to nothing doing. The few mines that are in operation are still selling on about a cost basis.

Tonnage Moves Better at New York

Better feeling and a slightly improved movement of bituminous coal are apparent at New York and lead to the belief that notwithstanding their apparent indifference, consumers are looking into the future. They are watching the anthracite situation closely and producers of screened coals are prepared to take advantage of conditions should there be a suspension of mining.

Cheaper grades apparently are in the discard due to the low prices at which the better grades can be purchased. With the improvement becoming stronger salesmen look for the placing of many orders that have been held back for some time.

The tidewater market remains practically unchanged. Shippers are cautious in sending tonnage to the piers.



Mid-July has brought no improvement to the Philadelphia soft-coal market, although there has been a little contracting on account of some agreements having expired. Part of the trade reports more business, although all deplore the fact that it is about an even break so far as profit is concerned.

Producers are trying to induce regular customers to stock up coal, as the tonnage above ground is close to the smallest on record and anthracite strike talk is in the air. The possibility of trouble in the British coal fields has not escaped the attention of local operators.

Slack continues to be a wanted fuel, and the large users of this coal are in the market for surplus fuel for stocking as well as for current consumption. The demand has been quite well met of late, but, of course, there has not been sufficient to meet all calls.

Tide trade is as quiet as ever, although there seems to be an occasional better demand for bunker coal. No charters for overseas shipments have been closed for weeks.

One week is almost like another these days in the Baltimore coal trade. A few companies handling better grades have contracts that cover considerable of their production possibility for some months, but a number of others are far behind in the average contract situation and are selling a considerable part of their present reduced production at prices that are far from satisfactory. It is true that there is more inclination to store as fall approaches and the possibilities of an anthracite strike affecting the bituminous situation prove more acute. Some of the large industries have abandoned the policy of merely buying for immediate needs and are creating reserves, but this is far from general. Less desirable coals are especially difficult to sell, bringing prices that prevent profits. In the face of European production complications export movement is flat. Quotations are about the same as for several weeks past, high-grade steam coals being easy to obtain at from \$1.65 to \$1.85.

At Birmingham disposition of domestic coal is still most troublesome. With unusually hot weather dealers are doing little business, most of them having ample coal on hand to meet straggling demands. There is little spot buying and deliveries on contracts are being extended and restricted to a menacing degree. There is scarcely any movement of the cheaper grades of lump and other domestic sizes.

The commercial market is about holding its own. Inquiry is light and sales of spot coal have not increased materially, if at all. A few new contracts are reported, but coverings are mostly confined to renewals. The Central of Georgia Ry. and the Ocean Steamship Co. completed the list of the large utilities to make contracts when they closed last week for something over 800,000 tons of washed coal from the mines on the Central lines. The bunker trade is still dull and requirements light.

Prices f.o.b. mines are reported remaining within the schedules which have ruled for the past month or more. While demand is limited for both steam and domestic grades, mines are operating with this situation in mind and there is no surplus of serious proportions of any grades.

Hard Coal Trade Gains Gradually

Demand and quotations for independent anthracite showed several changes at New York last week, with the result that prices for individual coals registered an increase. Demand is not as strong as expected in view of the uncertainty of wage negotiations, but this does not seem to bother consumers, who apparently believe there is enough coal above ground to take care of their needs no matter if there should be a suspension.

Some of the larger companies are said to be sold up on egg and stove but find difficulty in disposing of chestnut

unless taken with either egg or stove. Independent coals are moving steadily with the exception of chestnut. Pea is in good shape and No. 1 buckwheat has picked up considerably. Surplus tonnages of rice and barley are going to the storage piles.

Retail dealers complain of the slowness of business and are endeavoring to stimulate the storing of winter fuel.

At Philadelphia the anthracite trade is a bit improved, though the operators seem to have as much difficulty as ever to move their coal. The real impetus comes from the conference at Atlantic City, for even dealers who were inclined to withhold buying are now ordering better.

Independents are reported to be moving blocks at 25c. under company price on nut and as much as 50c. on pea. Retail prices are little, if any, changed. Some few dealers have increased about 25c., while others are anxious to do so, but are afraid of the effect it will have on their business. So far most of them have absorbed all the monthly raises.

Steam sizes are extremely quiet and the storage yards of company shippers still get a surplus that cannot be sent to market. The independent shippers are selling off price from 25 to 50c. on buckwheat and about 25c. on barley and rice. Of all the sizes barley continues to be in strongest demand.

Among dealers in Baltimore the feeling is growing that there probably will be a strike, but that it will not be of great duration. Fair stocks are on hand, as the public has not been buying heavily and the majority of coal merchants have kept ahead each month in receipts as compared with orders on their books. While some dealers may add additional supplies during the coming months, it is not likely that there will be any heavy storing unless conditions change materially. It is pretty sure that the retailers here will have to advance retail prices Aug. 1. The present schedule was created for June, the retail trade absorbing the wholesale advances that took place July 1.

At Buffalo there has been a better sale of anthracite lately, apparently in the belief that there is to be a strike. The increased demand is not insistent, but it will be if the meetings on the wage question come to nothing, as seems likely. Most of the retailers report that up to this time they have sold less coal for house use than in former summers.

New concerns are offering coke, so it seems that that trade is to be pushed anyhow, and besides that there is a new smokeless vein developing that is to be put on the market. The oil distributors also are active.

Lake shipments are still running down. For the week they were only 17,800 tons to Duluth and Superior and 2,000 tons to the Sault. Rates are unchanged.

Connellsville Coke Market Hopeful

The accumulation of furnace coke on track at Connellsville has now been practically all worked off. The high point was about the middle of May, with more than 25,000 tons. This was in strong hands, not disposed to peddle or sacrifice it, and the bulk of it was gradually worked off on contract shipments, a little being exported.

There is talk now that the spot furnace coke market is stronger. It seems still to be quotable at \$2.75@2.85, but some sellers seem to hope soon to be able to get \$3. This is doubtful, however, for it has just leaked out that one of the last contracts made was at \$2.85, this being for the entire half year. Contracting in general was at \$3. It is now said that with a fairly heavy operation there would be no loss at \$2.85.

Spot foundry coke is moving a little better, but in general must be described as dull. The market remains quotable at \$3.75@4.25, this being for standard foundry coke, i.e., 72-hour selected. Some coke is sold for foundry use at lower prices, not fully standard.

Car Loadings, Surpluses and Shortages

	Cars Loaded—	
	All Cars	Coal Cars
Week ended July 4, 1925.....	864,452	134,030
Previous week.....	991,341	159,473
Week ended July 5, 1924.....	757,904	109,398
	Surplus Cars—	
	All Cars	Coal Cars
July 7, 1925.....	311,572	112,256
June 30, 1925.....	307,495	109,404
July 7, 1924.....	359,191	169,607
Car Shortage—		
July 7, 1925.....
June 30, 1925.....
July 7, 1924.....

Foreign Market And Export News

British Coal Market Unsettled by Threatened Suspension

Conditions in the Welsh steam coal trade are growing more disquieting owing to the unsettled situation created by the prospect of the termination of the miners' wage agreement at the end of July. The trade is most concerned about whether there will be stoppage at the end of July. New business has not come forward very readily of late, but in view of the possibility of a stoppage the colliery owners, while willing to sell coal for spot shipment on the basis of recent levels, are asking enhanced figures for later delivery. They anticipate that depot owners and other consumers abroad will come on the market for considerable supplies for stock to meet the contingency of a general stoppage.

With so much uncertainty in the national coal position it was inevitable that local conditions should be somewhat erratic in the Newcastle-on-Tyne coal trade. The possibility of a stoppage may have a stiffening effect, but it is not apparent yet, and in any case will be an artificial improvement. In the coal tonnage chartering market rates have been fairly steady, but, owing to local holidays, the volume of business has been on a small scale. The only important inquiry in the market is that of the Latvian State Rys. for 50,000 tons of Northumberland, Durham, Yorkshire, Scottish or Monmouthshire steam coals to be delivered from September to the close of navigation.

Production by British coal mines in the week ended July 4, a cable to *Coal Age* states, totaled 4,675,000 tons, compared with 4,420,000 tons in the preceding week.

Hampton Roads Trade Unsettled; Market Tone Firm

Business at Hampton Roads last week was unsettled, pending the outcome of negotiations on which a possible hard-coal strike will be based. No coal was being sold ahead under any circumstances, everything being on a spot basis. Prices, however, remained practically unchanged. The output coming to this section was about nor-

mal, all mines running on a basis of three days a week. Some impetus has been given trade by foreign shipments, said to be provided for in anticipation of a British strike. The tone of the market was firm.

The Smokeless Fuel Co., agent at Norfolk for the P. L. M. French line of steamers, has arranged for shipments of about 500,000 tons of coal to French and English ports. It will be carried on the P. L. M. line, and several shipments have already gone forward.

Purchases at Low Level in French Market

The French coal market continues quiet. Orders cover only the most urgent needs and then not overgenerously; concessions in consequence, have become, for the time being, a commercial habit.

Since July 1 the Loire collieries have reduced the men's salaries from 0.50f. to 0.30f. daily. In manner of protest against this measure, extremists have resorted to provoking agitation, but it is not likely that a strike will intervene.

The promises made to the North and Pas-de-Calais mines, relative to a reduction in transport tariffs and the re-establishment of import licenses on German coal not having been kept it is possible that these collieries will eliminate entirely the allowance for high cost of living, which had been cut to half of its original amount.

Beginning July 10 anthracitic sized coals from the Ruhr (reparation fuels) were advanced 10f. per ton.

All Grades Quiet in Belgium

The Belgian coal market is as unsettled as ever on industrial grades, the outlet for which is worse since consumption by metallurgists has fallen to naught, due to a strike. The slide of the franc, however, hinders foreign competition.

With regard to household fuels the situation is by no means bright, except for anthracite, which continues scarce.

Negotiations on a new wage convention have missed fire. The employers had proposed that wages be established in harmony with the basis furnished by the index number, but that in case of a crisis or a boom, salaries should be swayed by the price of coal, without, however, falling below 15 per cent of the basis furnished by the index number. A cut of 5 per cent was to have been applied July 1, but in consideration of present circumstances the operators have decided to postpone its application until Aug. 1.

Export Clearances, Week Ended July 18, 1925

FROM HAMPTON ROADS

	Tons
For France:	
Fr. Str. P. L. M. 13, for Rouen.....	5,507
For Nova Scotia:	
Br. Str. Hochelaga, for Sydney.....	7,107
For Canada:	
Br. Str. Manchester Spinner, for Quebec	7,168
Dan. Str. Paris, for Three Rivers..	4,501
For Canal Zone:	
Nor. Str. Fram, for Cristobal.....	300
Amer. Str. Achilles, for Cristobal..	12,041
For Jamaica:	
Nor. Str. Dagfin, for Kingston.....	2,186
For Cuba:	
Dan. Str. Belgien, for Havana.....	2,914
For Far East:	
Br. Str. Tydens, for Far East Ports..	2,507

FROM PHILADELPHIA

For Newfoundland:	
Br. Str. Peveril, for St. Johns.....	—
For Cuba:	
Nor. Str. Sokndal, for Havana.....	—

FROM BALTIMORE

For Chile:	
Br. Str. Ellaston for San Antonio (coke)	2,518

Hampton Roads Pier Situation

	July 9	July 16
N. & W. Piers, Lamberts Pt.:		
Cars on hand.....	1,368	1,552
Tons on hand.....	84,656	99,667
Tons dumped for week.....	130,388	118,937
Tonnage waiting.....	22,000	10,000
Virginian Piers, Sewalls Pt.:		
Cars on hand.....	787	1,018
Tons on hand.....	51,000	68,950
Tons dumped for week.....	91,676	59,976
Tonnage waiting.....	2,891	5,318
C. & O. Piers, Newport News:		
Cars on hand.....	2,391	2,853
Tons on hand.....	114,065	142,650
Tons dumped for week.....	196,511	143,513
Tonnage waiting.....	12,200	6,360

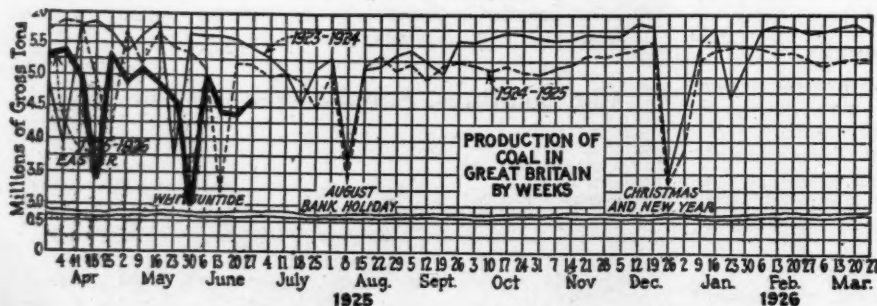
Pier and Bunker Prices, Gross Tons

	PIERS	July 10	July 17†
Pool 1, New York.....	\$5.35@5.60	\$5.35@5.60	\$5.35@5.60
Pool 9, New York.....	4.75@5.00	4.75@5.00	4.75@5.00
Pool 10, New York.....	4.50@4.60	4.50@4.60	4.50@4.60
Pool 11, New York.....	4.25@4.50	4.25@4.50	4.25@4.50
Pool 9, Philadelphia.....	4.65@4.90	4.65@4.90	4.65@4.90
Pool 10, Philadelphia.....	4.35@4.55	4.35@4.55	4.35@4.55
Pool 11, Philadelphia.....	4.25@4.30	4.25@4.30	4.25@4.30
Pool 1, Hamp. Roads.....	4.25	4.25	4.25
Pool 2, Hamp. Roads.....	4.10	4.10	4.10
Pools 5-6-7, Hamp. Rds.	4.00	4.00	4.00
	BUNKERS	July 10	July 17†
Pool 1, New York.....	\$5.60@5.85	\$5.60@5.85	\$5.60@5.85
Pool 9, New York.....	5.00@5.25	5.00@5.25	5.00@5.25
Pool 10, New York.....	4.75@4.85	4.75@4.85	4.75@4.85
Pool 11, New York.....	4.50@4.75	4.50@4.75	4.50@4.75
Pool 9, Philadelphia.....	4.80@5.05	4.80@5.05	4.80@5.05
Pool 10, Philadelphia.....	4.60@4.80	4.60@4.80	4.60@4.80
Pool 11, Philadelphia.....	4.45@4.65	4.45@4.65	4.45@4.65
Pool 1, Hamp. Roads.....	4.30	4.35	4.35
Pool 2, Hamp. Roads.....	4.20	4.20	4.20
5-6-7, Hamp. Rds.....	4.10	4.10	4.10

Current Quotations British Coal f.o.b. Port, Gross Tons

	Quotations by Cable to Coal Age	July 11	July 18†
Cardiff:			
Admiralty, large.....	26s. 6d.	25s. 6d.	26s.
Steam smalls.....	15s. @ 15s. 6d.	15s. @ 15s. 6d.	15s. @ 15s. 6d.
Newcastle:			
Best steams.....	17s. @ 18s.	17s. @ 18s.	17s. @ 18s.
Best gas.....	18s.	18s.	18s. 6d. @ 19s.
Best bunkers.....	17s. @ 18s.	17s. @ 18s.	17s. @ 18s.

†Advances over previous week shown in heavy type; declines in italics.





News Items From Field and Trade



ARKANSAS

Chancellor W. E. Atkinson early in July granted an injunction to mine operators of the Clarksville Chancery District against District No. 21 of United Mine Workers and all local unions, restricting them from interfering with the operating of mines in this district, all intimidating methods and destructions and all wrongful assembling which would cause any violation of those restrictions. The plaintiffs are: Bernice Anthracite Coal Co., Collier-Dunlap Coal Co., Werner-Dunlap Coal Co., Arkansas Mining Co., of Clarksville; Semi-Anthracite Coal Co., of Coal Hill. It is not believed the injunction actually will prohibit public gatherings of the miners, such as were held at Clarksville, Paris and Russellville so long as the men conduct themselves in such a manner as will comply with the terms of this injunction.

J. G. Puterbaugh, of McAlester, Okla., announces that the tippie of the Backbone mine, Excelsior, near Fort Smith, is to be rebuilt at once. It was destroyed by fire late in June.

Lewis Noland and Albert Wilson, of the Pleasant View community, northwest of Atkins, have struck coal in their new shaft.

ILLINOIS

Frank Lutz and Orley Grissom are sinking a new coal mine just east of Astoria. The shaft will be about 50 ft. deep and a steel cage will be installed to be operated by electricity. The bed of coal is 5 ft. thick and is of excellent quality.

The prolonged slump which the mining industry has undergone in Illinois, as well as in many other states, was reflected in an interesting manner when Attorney Cairo A. Trimble, Princeton, filed a petition with the board of review of Bureau County asking that the assessed value of the coal rights owned in that county by the Spring Valley and St. Paul coal companies be reduced from \$10 an acre to \$1 an acre. Mr. Trimble, in his petition, alleges that coal mining in northern Illinois, as an industry, has been practically wiped out and that the assessed valuation of the two coal companies which he represents is much too high.

The Kerens-Donnewald coal mine at Worden, owned by the McKinley System, which has been closed for a year and a half, has steam up again and a corps of men have been put to work cleaning up the debris in the mine. The movement to start the mine has

been launched by the residents of Worden, who expect to operate it as a home trade mine if their venture is successful. Some time ago it was made known that the McKinley interests did not expect to operate the mine again, but intended to junk the machinery. The mine was originally sunk by the Kerens-Donnewald Coal Co. about 25 years ago.

The McLean County Coal Co., Bloomington, plans to reopen its mine in the near future, with M. B. Stewart, a graduate of the mining engineering department of the University of Illinois, in charge.

Mine No. 7 of the Franklin County Coal Co., at Royalton, which had been down since last February, resumed operation July 16.

Stoughton, Bates and Foster, who operate the new coal mine at Repatee, a few miles from Galesburg, have their new mine in working order. The mine is located on the main highway between Maquon and Farmington.

"Old North," the Taylor Coal Co.'s mine at Royalton, started work on July 15. The mine suspended operations last April. An agreement was reached July 11 between union officials and company representatives concerning certain points in the working agreement that were in dispute.

The Ladd mine, a few miles from Princeton, has been sold by the Illinois Third Vein Coal Co. to Peter Bergandi, a former coal miner, for \$5,000. The property consists of sixty-five acres of surface land and all buildings which have been left upon the premises. The mine, once the largest in northern Illinois, has been closed since last fall, when the stockholders concluded to abandon the mining business at Ladd because of heavy financial losses caused by the inroads of non-union West Virginia and Kentucky coal. In its palmy days this mine property was worth at least \$100,000. Twenty of the sixty-five acres has been grazing land for mine mules for at least thirty years and is rich, fertile land.

The Nason Coal Co., Nason, has received an order for a carload of coal from Houston, Texas, which makes the eleventh state into which coal from Jefferson County is being shipped at the present time. The Nason mine is disposing of all the coal it can mine at this time and is making arrangements to increase production as rapidly as possible.

The coal mine of the Indiana & Illinois Coal Corporation, of Chicago,

located in Nokomis, was closed down recently, throwing 800 men out of employment. Officials of the company announce that the mine will be reopened about Aug. 1, when repairs now being made on the main shaft are completed. All the mines operated by the corporation in Montgomery County, located at Nokomis, Witt, Taylor Springs and Kortkamp, are closed down at the present time. The shaft located at Nokomis has a hoisting record of over 6,000 tons per day, and when running at full capacity employs over 1,200 miners.

INDIANA

Following not guilty verdict by a jury at Terre Haute in the case of Vincent Povelight, mine shotfirer accused by state mine inspectors of firing illegal shots, the question came up of whether the other forty-odd miners facing similar accusations should be tried or dismissed. "I will put the case up to the state mine inspectors," said Assistant Prosecutor Littlefield. "If they wish to try the cases, we will go ahead, either separately or make one case out of all, as they wish. Otherwise, the remaining cases probably will be dismissed."

The Eastern Coal & Export Corporation has filed a certificate of withdrawal from the State of Indiana.

The United Electric Coal Co., a Delaware corporation and operating in two Illinois fields, plans the expenditure of about \$2,225,000 in the next eighteen months in developing of tripping operations in Vigo and Sullivan counties. The company will erect two units this year, two next spring, two a year from now and two the following spring. Each unit will consist of one stripping shovel and one loading shovel. This machinery is capable of mining and loading about 1,000 tons of coal daily. Operations will continue the year round. It is the intention to build an enormous steel tippie at some convenient place in the field so that not only mine-run but various kinds of screened coal may be shipped.

IOWA

The Pershing Coal Co. has obtained options in Whitebreast township, near Laomi, and expects soon to begin drilling for coal.

In order to demonstrate the advantages of coke as furnace fuel, the M. W. Warren Coke Co., of St. Louis, in co-operation with the Carbon Coal Co., Des Moines, local agent for the former company, has fitted up a furnace dem-

onstrator on a truck. The exhibit makes the rounds of Des Moines streets. A representative of the coke company accompanies the lighted furnace, which is drawn about the streets of the city with a team of horses. At intervals he stops the truck and explains coke burning. The furnace was lent by the Green Foundry & Furnace Works of Des Moines.

KANSAS

Repairs at mine No. 51 of the Central Coal & Coke Co., in the southeastern Kansas field, which was closed down several weeks ago, have been completed by July 15, and the mine is in condition to be reopened. Its normal production is between 1,100 and 1,200 tons a day. It employs 350 men.

The Kansas Supreme Court on July 11 decided in two appeals from the Crawford County District Court—E. M. Bird against the Young Coal Co. and Felix Corvi against the Crowe Coal Co.—that district judges have the right to review awards in compensation cases. The Supreme Court held that the District Court may review an award and make changes in either the amount or duration of time over which compensation payments are to be made. These cases were appealed to test the principle involved and the decisions affect a large number of claims for compensation for injuries suffered by mine employees.

KENTUCKY

A delayed shot at the Wilson Mines, Bon Harbour, near Owensboro, on July 9, resulted in the death of Mayfield House, 20 years of age, a shotfirer, who was found with his head blown off.

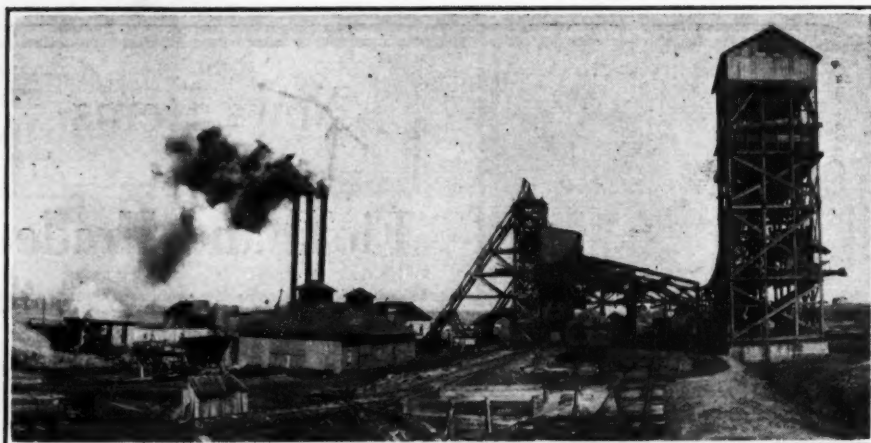
The Munro-Warrior Coal Co., with headquarters at Birmingham, Ala., and operating extensively in both the Alabama and Kentucky fields, is planning major improvements and betterments at its mines at Nortonville, the extent and character of the work not having been announced as yet. The Kentucky mines of the company are reported to be operating on a better basis in recent weeks, the larger part of the output being shipped into Illinois and Indiana territory, the demand for all grades of both steam and domestic having shown material improvement of late.

Failure of the First State Bank at Elkhorn City, Pike County, which recently closed its doors voluntarily, is said to have been caused by slow business in the coal fields and frozen assets.

The mining towns of Haymond, Hemphill and Neon were reported flooded by raging waters in mountain streams on July 13, as a result of cloudbursts in the hills.

MISSOURI

Governor Baker has appointed members of the State Board of Geology and Mines as follows: Elias S. Gatch and Phillip N. Moore, St. Louis; C. T. Orr, Webb City, and Edward M. Shepard, Springfield. Their terms expire



Mine No. 1 of the West Kentucky Coal Co.

This operation, located near Madisonville, Ky., is one of the St. Bernard group, which has a daily capacity of 15,000 tons. This group was acquired by the present owners in May, 1924.

on May 22, 1929. The appointments are subject to confirmation by the State Senate at its next session in 1927.

O. A. Quisenberry, has struck a good bed of coal in the mine he is sinking on his farm just west of Vandalia, on Highway No. 22. At first the miners struck what is generally termed a valley in the vein and it was extremely difficult to cut through this, but in leaving the main entrance the coal struck was as fine a bed as has ever been found in this locality. This valley will be of some value to them in driving their entrance as it will form a splendid base at the bottom of the shaft.

MONTANA

Edward Davies has been appointed state coal mine inspector by the Industrial Accident Commission to take the place of George N. Griffin, of Roundup, resigned. Mr. Davies also is a resident of Roundup. Griffin has held the position six years but because of failing health and eyesight was forced to resign. Davies, who was endorsed for the position by the state Federation of Labor at its meeting at Missoula, is 41 years old, was born in Pennsylvania, and his mining experiences cover six states and fields in England. After spending years in quartz mining he began mining coal 13 years ago.

NEW YORK

For the three months ended June 30, Burns Bros., New York City, report a net income of \$416,855, against \$319,968 in the corresponding period last year.

The Delaware, Lackawanna & Western R.R. has filed plans for the erection of a 40,000-ton concrete trestle at its crossing of Delaware Avenue, in the northern part of Buffalo, to be used for the retail coal trade. It already has half a dozen such trestles about the city.

Following the closing of the Buffalo office of the Maher Collieries Co., of Cleveland, consequent on a merger of companies there, O. E. Southard, who opened the branch office, has formed a copartnership with Ralph K. Ford,

coal operator of Columbus, Ohio, and an office has been opened at 182 Main Street, under the name of the Buffalo-Ford Coal Co.

Dr. T. H. Agnew, coal dealer, of Medina, has taken as Buffalo resident partner William J. Smith, late of the Maher Collieries office, and an office has been opened by the firm at 522 Marine Trust Building, under the name of the Agnew-Smith Fuel Co. Dr. Agnew will continue his residence and coal business in Medina.

OHIO

A heavy rain on July 16 flooded the Provident mine of the Clarkson Coal Co. at St. Clairsville. Several hundred men were made idle. In addition to water pouring into the shaft, the boiler house was flooded, causing a cylinder head in the hoisting engine to blow out.

H. C. Cain, Columbus purchasing agent, has awarded the contract for 21,000 tons of Pomeroy nut, pea and slack for the municipal light plant, garbage disposal plant and other departments to the W. S. Harman Coal Co., of Columbus, at \$1.14 per ton, f.o.b. mines. The freight is \$1.26 per ton. The coal is to be shipped from the Co-operative Coal Co.'s Hobson and Blackstone mines, near Pomeroy. Bids for 8,700 tons for the Municipal Water Works department were rejected and will be readvertised.

Workmen are dismantling the tippie and machinery at the Gosline mine, near New Lexington, owned by Gosline & Co., Toledo. The owners say the machinery is too valuable to remain idle.

Suit was entered for an ancillary receiver for the Marmet Coal Co., of Cincinnati and Raymond City, W. Va., before Judge Smith Hickenlooper in the U. S. Court for the southern district of Ohio on July 14 by the Fourth and Central Trust Co., of Cincinnati, as trustee for the holders of \$1,250,000 of bonds of the coal company. Main proceedings for the foreclosure of the mortgage were filed in U. S. District Court for West Virginia, after the coal company failed to meet its interest obligations and defaulted in the payment of 10c. a ton on coal produced, which

was to go into a sinking fund for the payment of the bonds. That Court appointed V. L. Black, G. W. Williams and E. L. Waddell as receivers of the property of the company in West Virginia.

In his order Judge Hickenlooper assumed ancillary jurisdiction and ratified the order of the West Virginia federal court, granting the bank's petition and naming Messrs. Black, Williams and Waddell as receivers in this jurisdiction.

Two large coal companies in the New Philadelphia field will soon resume operations after an idleness of some time. The Midvale-Goshen Coal Co., of Cleveland, is cleaning up two mines and will start operations soon, employing 200 men. The Underhill Coal Co., of Cleveland, also will open three mines soon, after an idleness of about fourteen months.

In closing up the affairs of the Burton-Townsend Co., of Zanesville, one of the subsidiaries of the R. L. Dollings Co., Romert M. Pfeiffer, a Columbus attorney, bought in the assets at receiver's sale for \$200,000. He has sold the two operating brick plants to the Zanesville Clay Products Co. and three sand and gravel plants to the Ayers Mineral Co., of Zanesville. He is now trying to dispose of four small coal mines in the Crooksville field in order to close up the affairs of the company.

David Watkins, president of Sub-District No. 6 of the United Mine Workers, addressed a large gathering of miners at New Lexington, recently, calling upon the men to "stand pat" for the Jacksonville scale. Union representatives will be sent to all mines in this section operating under the 1917 scale and use peaceful means to induce the men to cease work.

PENNSYLVANIA

The Consolidation Coal Co. resumed operations Monday, July 20, at Mines No. 104 and 106, in the Meyersdale field. These mines have been down since April 1. The company has found a market for 16 to 17 cars a day, which will keep the mines working part time each week.

William M. Henderson, president of the Henderson Coal Co.; Albert R. Budd, of the Hillman and Diamond companies, and Floyd B. Lockhart, general sales manager of the Hillman Coal & Coke Co., all well known in Pittsburgh, recently, had Jerome G. Farquhar, treasurer of the Plymouth Oil Co., a Delaware concern, arrested on charges of false pretense and issuing false statements in connection with the promotion of the Plymouth Oil Co. The plaintiffs are minority stockholders. The fraud concerns the alleged issuance of 1,000,000 shares of stock instead of 350,000 shares. An equity suit was also filed in Delaware against officials connected with the Benedum & Trees interests, well-known oil operators, who control the Plymouth company, the stock, which was originally issued at \$1.50 a share, rose as high as \$37 a share. The plaintiffs declare that as a result of issuance of more stock the value of their stock has dropped to \$10, while the defendants claim the market value of the stock is \$28 a share. All the parties in the suit got their stock at the "inside" price.

The weekly report of the Pittsburgh Coal Producers' Association, released July 16, covering statistics of the previous week, shows that of a weekly capacity of 629,880 tons, the total production of the district was 42,607 tons, or 6.8 per cent. These reports cover practically all the large commercial interests of the Pittsburgh district, including the Pittsburgh Coal Co. The percentage of operations compares with 8.3 per cent for the week ended July 4 and 31.6 per cent for the week ended July 12, 1924. Sixty-seven out of 80 reporting mines are idle. The production was divided as follows: Rail, 34,259 tons; river, 6,918; used 1,430.

What is said to be the largest cargo of anthracite ever put aboard ship for transportation by sea was shipped this week by the Philadelphia & Reading Coal & Iron Co. The cargo consisted of 6,500 tons, compared with normal cargoes of 1,500 to 1,600 tons. It was loaded on the steamboat Bristol at Port Richmond, Philadelphia, July 21, consigned to Providence, R. I.

Four miners were seriously burned in a gas explosion at the Truesdale colliery of the Glen Alden Coal Co., at Nanticoke, July 15. The cause of the blast is not certain, but the finding of a partly burned match at the scene of the explosion leads to the suspicion that one of the men was smoking, in violation of the mine laws. The men were wearing electric lamps.

The Jefferson & Indiana Coal Co. has opened an additional mine at Tide, where the company is producing 400 tons daily. Another at Coal Run has been opened. This company is now mining 7,000 tons daily in the various mines leased from the Rochester & Pittsburgh Coal & Iron Co. and, operating on the 1917 basis, expects soon to be mining 10,000 tons daily.

The new \$2,000,000 coal breaker under construction at Lansford for the Lehigh Coal & Navigation Co. will be able to handle the coal taken from three different collieries.

Changes affecting the Woodward, Bliss and Storrs mines of the Glen Alden Coal Co. were announced last week. Joseph A. Reynolds, who for some time worked as superintendent at the Woodward colliery, in Edwardsville, and who was relieved for a vacation, is now superintendent of the Storrs colliery. G. P. Troutman, superintendent of the Bliss mine in the Nanticoke region, has succeeded Mr. Reynolds as Woodward superintendent. The superintendency of the Bliss mine has been taken over by James Garvin, who was employed at the Storrs colliery for some time.

Secretary of Labor and Industry Richard H. Lansburgh has appointed Melvin G. Lehman, of York, chief adjuster of the Bureau of Workmen's Compensation, as assistant director of that bureau. Lehman will continue his duties as adjuster and will act as the general assistant of William H. Horner, director of the bureau, having charge of the bureau in his absence. The appointment is in keeping with the recent appointment of a deputy to the Secretary. There has never been anyone authorized to act in the absence of either the Secretary or the bureau chief.

TENNESSEE

L. T. Dee, of the Superior-Rock Springs Coal Co., with headquarters in Ogden, has been named as one of the forty directors of the National Coal Association. He will represent Utah and Wyoming on the Board and is the first Ogden man to receive such a distinction. The election took place at the recent Chicago meeting.

The Liberty Coal Mining Co., Commercial Bank Bldg., Memphis, of which Fred M. McDonald, Sr. is president, has increased its capital from \$100,000 to \$250,000.

UTAH

Two more Utah coal leases were announced early in July by the Secretary of the Interior. One of them comprises 1,800 acres in Book Cliffs region, about eleven miles south of Sunnyside. The



A Trip Emerging from Nisbet Mine

This mine—No. 11—located near Earlinton, Ky., is one of the St. Bernard group of the West Kentucky Coal Co.'s holdings.

government royalty is 12½c. a ton for coal mined and there must be a minimum investment of \$75,000 during the first three years with a minimum production of 50,000 tons a year beginning with the fourth year of the lease. The other tract includes 800 acres in Pleasant Valley, Wasatch Plateau, about three miles west of Clear Creek. The royalty is on a basis of 10c. for each ton of coal mined, and the minimum investment must be \$90,000 during the first three years with a minimum production of 50,000 tons a year beginning with the fourth year of the lease. The sale of these leases will be made in Salt Lake City in the near future.

WASHINGTON

The Bellingham Coal Co. has obtained control of the Tiger Mountain Mine, 4½ miles south of Issaquah, and is preparing to open up the property at once. It is reported that eight veins of a superior grade of coal from 5 to 10 ft. thick are indicated on the property. Lawrence and George Campbell, of Issaquah, have taken a contract to drive a 90 ft. rock tunnel on which they have started work. This tunnel should cut a 10 ft. bed at a point to provide a 400-ft. lift. By the last of August the company expects to be in a position to produce 500 tons of coal a day.

WEST VIRGINIA

E. L. Douglass, receiver for Jewett, Bigelow & Brooks, by order of the U. S. District Court of West Virginia, has been empowered to turn back to the owners of the land the properties of the Seminole Gas Coal Co., no bids for the properties having been received. The J. B. B. Co. expended about \$365,000 on this plant at Gypsy, and it produced about 18,000 tons of coal a month. The same process will be followed with the property of the Guyon Mining Co., at Manbar, which produced about 22,000 tons per month. Steps have been taken in the United States courts to turn this property back to Miss Irene Hichman, owner of the land.

Howard W. Showalter, president of the Continental Coal Co., announces that the Monongahela and B. & O. Railroads have agreed to recognize Sands mine of the company, at Rivesville, as a joint mine.

An involuntary petition of bankruptcy was filed on July 6 in the U. S. court for the Southern District of West Virginia against the Synn Glen Fuel Co., of Newlyn, Fayette County, on the application of the Charleston Hardware Co. The creditor claims that the coal company owes in excess of \$1,000 and that it committed an act of bankruptcy in executing a deed of trust last February to C. B. Floers, trustee for the Banks-Miller Supply Co., of Huntington, to secure a claim of \$6,103.41.

Fire was discovered in the Osage Mine of the Brady-Warner Coal Corporation, at Osage, July 10, soon after the day shift had left the mine. The fire, according to officials, is burning in an abandoned section of the mine.

R. M. Lambie, head of the state Department of Mines, was notified of the fire and District Mine Inspector William Moore arrived at the mine soon after the fire was discovered and began the work of extinguishing the flames. Mine rescue crews from both the Preston and Marion divisions of the Bethlehem Mines Corporation were sent to fight the fire. They were under the direction of Robert Reid, safety engineer of the Bethlehem corporation. Inspector Moore reported the fire under complete control July 11.

State mining inspectors say that the mine fire at the plant of the Eureka mine of the Bertha-Consumers Co., near Morgantown, has been extinguished, but that it will require 30 days to clean it up. The main fire started March 16.

A judgment of \$900 was awarded Shannon Bros. against the mines owned by Henry Ford at Twin Branch, in McDowell County, in the federal court at Bluefield. The plaintiffs sued on an alleged breach of contract for the sum of \$3,800.

CANADA

Foreign coal continues to arrive in Montreal in large quantities. In the past few days the steamer Baron Elinbank, from Glasgow, discharged 2,435 tons there. Other colliers to reach the port with cargoes are the Glencorrie, Glendochart, Keybar and Maple Hill. At Levis, Chicoutimi and Port Alfred a number of steamers are discharging cargoes of United States coal.

Eighty men employed by the Marcus mine, in the Edmonton district, Alberta, who had been out on strike on a wage disagreement since midnight on June 30, returned to work July 8. The men will work at the old scale until such time as the Edmonton quota for the Ontario coal shipment is mined and loaded. The other strikers decided to await the arrival of Fair Wage Officer Harrison, who was expected to try to bring about an agreement between operators and miners.

Traffic

I. C. C. Again Defers Cut in Rates from Kentucky

Suspension of the revised tariff on coal from eastern Kentucky and West Virginia mines to Mississippi River points and beyond has been extended until after a hearing is conducted by the Interstate Commerce Commission.

Illinois coal operators opposed the revision, which would have allowed the Kentucky and West Virginia operators a reduction of 15c. a ton on coal to Iowa territory and certain Mississippi River points.

The reduction had been allowed by the Louisville & Nashville R.R., the Chesapeake & Ohio R.R. and the Norfolk & Western Ry. last March, but was never put into effect, the Interstate Commerce Commission suspending the revision until a hearing could be conducted.

The hearing was to have been held in Chicago July 8, but none of the parties interested was ready for trial and the hearing was postponed. As the time for expiration of the suspension was near at hand, the suspension was extended. The Illinois operators contend that the proposed rates would discriminate against them. They assert that they are already working under rate and wage handicaps as compared with the inner crescent pits in the East.

Southwest Coal Men Ask Refund Following Rate Cut

At the conclusion of a hearing in Kansas City, Mo., July 15, attorneys for about four hundred coal dealers in Kansas and Nebraska who are demanding a refund on freight rates from railroads carrying Colorado coal into their districts, and attorneys for the railroads fighting the refund demand, were instructed by Alfred S. Knowlton, examiner for the Interstate Commerce Commission, to file briefs with the commission not later than Sept. 1. The dealers base their claim on a recent decision of the Commission reducing freight rates from the Colorado field into Kansas and Nebraska. They ask a refund of the difference between the old and new rates on coal shipped them in the last two years. Those in the western part of the two states, where the reduction was greatest, were most interested in presenting their case before the commission examiner.

Orders Cut in Hard Coal Rates To Staten Island

Rates on anthracite from the Pennsylvania mines to Staten Island, N. Y., were declared unreasonable and unduly prejudicial on July 15 by the Interstate Commerce Commission, which ordered the railroads to establish rates not more than 13c. above the rates now applying to Bayonne, Jersey City and other points in northern New Jersey taking the same rate. A differential of only 10c. above the northern New Jersey rate is allowed to certain points via the Pennsylvania R.R. The change is to be effective Sept. 1. At present the rates to Staten Island are in some instances 70c. per ton higher than those to northern New Jersey.

Sanction New Rates in New York

The Public Service Commission of New York has approved a new freight schedule of the Lehigh Valley R.R. on bituminous coal and coke, including coke breeze, dust and screenings, carloads, from Buffalo, East Buffalo and Harriet to various stations on its lines and on lines of other carriers; changes effect reductions; effective July 30, 1925.

A new regulation of the Delaware, Lackawanna & Western R.R. filed with the Public Service Commission provides for switching absorption of 38c. per ton (net or gross, as rated) at Corning, N. Y., on coal and coke, carloads, switched by the New York Central.

Industrial Notes

P. S. Gardner, American Rheolaveur Corporation, with Andrews Allen, of Allen & Garcia, left July 15, on the S.S. Mauretania for Europe, where visits will be made to plants in Belgium, France, England and Germany. The purpose is to see some of the 150 Rheolaveur washeries located in Europe, the total capacity of which is 40,000,000 tons annually.

The Worrell Mine Tie Manufacturing Co. has been organized with a capital stock of \$50,000 and expects to begin operations before Aug. 1. This company will manufacture steel mine ties and also do general electrical work. The officers of the company are J. Hugh Miller, president; J. G. Durant, vice-president; R. H. Worrell, manager; J. C. Durant, Jr., secretary-treasurer. R. H. Worrell, the manager, formerly was with the E. E. White Coal Co. at Statesbury, as chief mechanic for a number of years.

A. T. Shurick leaves for London Aug. 1 to study the Thornley briquetting binders, manufactured by the Thornley Binders, Ltd., 37-41 Gracechurch St., London, England. The plant of the British company is at Stromness, in the Orkney Islands.

Arlington Benschel, formerly vice-president and general sales manager of the Driver-Harrison Co., has announced his connection with the "Hybnickel" Alloy Products Co., as exclusive sales agent, with offices at 300 Madison Ave., New York City.

The Morrow Mfg. Co., Wellston, Ohio, announces the opening of a branch sales office at 1018 Fulton Building, Pittsburgh, Pa., in charge of V. T. Barkley, who has been associated with the coal-mining industry for the past fourteen years. Mr. Barkley will be glad to confer on and plan coal-handling problems.

Association Activities

The third quarterly meeting of the Pittsburgh Coal Mining Institute was held July 11 in the Chamber of Commerce, Pittsburgh. H. N. Eavenson, mining engineer, delivered the principal address at the afternoon meeting. S. C. Reynolds, safety inspector, handled the question-box discussions. S. A. Taylor delivered the chief address at the evening session, when C. P. Byrne, state mine inspector, handled the question box. A good attendance was noted.

Coming Meetings

Rocky Mountain Coal Mining Institute. Summer meeting, Aug. 26-29 at Price, Utah. Secretary, Benedict Shubart, Denver, Colo.

American Institute of Mining and Metallurgical Engineers. 132d meeting, at Salt Lake City, Utah, Aug. 31 to Sept. 3. Secretary, F. F. Sharpless, 29 West 39th St., New York City.

Oklahoma Coal Operators' Association. Annual meeting, Sept. 10 at McAlester, Okla. Secretary, A. C. Casey, McAlester, Okla.

New York State Coal Merchants' Association. Annual convention, Sept. 10-15, at Richfield Springs, N. Y. Executive Secretary, G. W. F. Woodside, Arkay Bldg., Albany, N. Y.

National Safety Council. Annual meeting Sept. 28 to Oct. 2, at Cleveland, Ohio. Managing Director, W. H. Cameron, 168 No. Michigan Ave., Chicago, Ill.

Tenth Exposition of Chemical Industries. Sept. 28 to Oct. 3, at Grand Central Palace, New York City.

Canadian Institute of Mining and Metallurgy. Annual western meeting Nov. 3-5, Winnipeg, Manitoba, Can. Secretary, George C. Mackenzie, Drummond Bldg., Montreal, Que., Can.

Fourth National Exposition of Power and Mechanical Engineering. Nov. 30 to Dec. 5, at Grand Central Palace, New York City.

Coal Mining Institute of America. Annual meeting, Dec. 9-11, Pittsburgh, Pa. Secretary, H. D. Mason, Jr., P. O. Box 604, Ebensburg, Pa.

New Equipment

New Shovel Is Largest Mounted on Tractors

The new Marion Model 125 shovel, with its all-steel boom, firebrick arch, high-pressure boiler, heavy gantry frame, extra large roller circle and improved hoisting unit with pressure oiling, is said to be the largest and heaviest excavator that has ever been mounted on crawling traction trucks. A number are now in coal stripping use.

This new shovel is full revolving, has large dipper capacity, and is designed throughout for the hardest work and toughest digging. The design and construction are such that the main upper frame, which carries all the machinery, including the boiler, piping and cap, can be shipped as a unit on railroad trucks. Because of this, a minimum amount of erection is necessary in the field.

The machine is mounted by three-point suspension on four crawling traction trucks and equalizing is accomplished by means of a pivoted, cast alloy-steel axle. In traveling over uneven ground the front trucks with their axle are free to adjust themselves in a vertical plane without a tendency to create stresses or strains in the frame, or cause a steering movement.

The lower frame is constructed of 30 in. I-beams which, at present, are the deepest manufactured. The top of the frame is covered with heavy 1-in. gusset plates. The lower circle is made of 80-lb. rails and is 16 ft. in diameter.

Propulsion is entirely through gears to all four of the crawler trucks. Any one of the trucks can be disconnected by a clutch. This makes steering easy and permits a small turning radius.

The boiler is a locomotive type with a fire brick arch as standard equipment. This arch is not only a fuel economizer but it also eliminates tube troubles by

preventing cold air from reaching the tubes while firing.

Hoist, swing and crawl main bearings are equipped with a lubrication system similar in design to that of an automobile engine and consisting of a motor-driven oil-circulating pump, sump tank, conductor and drainage piping. The makers believe this is the first power shovel to be equipped with a pressure oiling system.

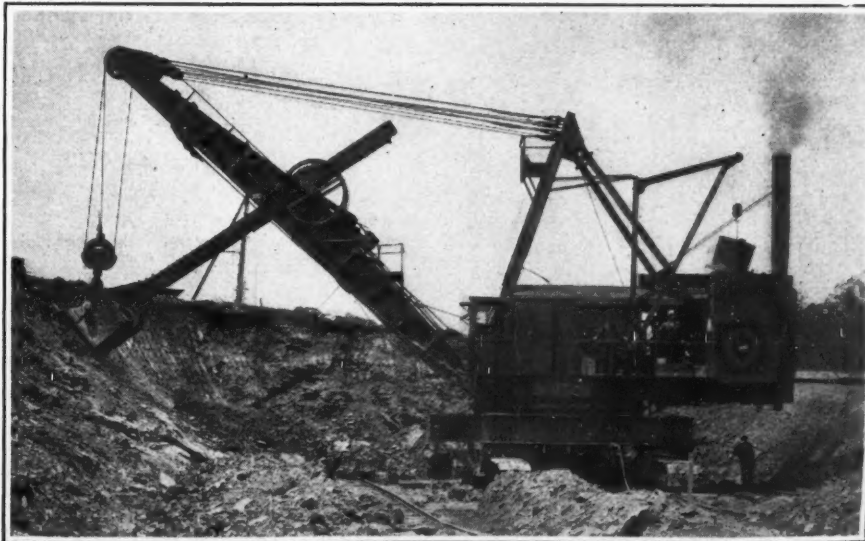
Strong Briquet Binder Will Harden with Age

A new binder for briquets that shows unusual cohesion will soon be introduced in this country from England, where the process has been in course of development for the past three years, a commercial plant involving an expenditure of something over \$500,000 being put in operation during the fall of last year.

At the plant of the Rose Patent Fuel Co., in Great Britain, large briquets, weighing 12 and 24 lb., such as are manufactured quite commonly in Great Britain were dropped from a height of 36 and 40 ft. onto railroad iron, and were fractured only at the point of impact, whereas the same test applied to coal-tar briquets resulted in their breaking up into small bits.

Another distinctive feature of this new binder is that it has the remarkable characteristic of hardening with age, much the same as cement. Thus, instead of disintegrating when not used at once, the briquets continue to harden for an indeterminate period.

The manufacturing process with this binder is exactly the same as with coal-tar pitch, except that less power is required for the grinding, and the plugging. The admixture of the binder with the fines is readily made at tempera-



Large-Type Crawler Shovel on the Job in a Coal Pit

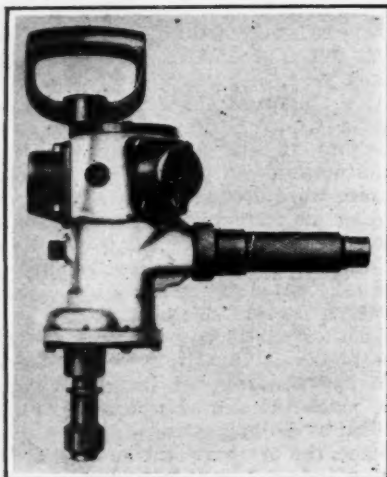
This new shovel is built for hard work in places which it can reach on its own tractors. Heavy construction throughout and the incorporation of a number of advanced ideas in shovel design are counted on to make this excavator popular in coal mining.

tures of 70 to 80 deg., as compared with 110 to 120 deg., as required with coal-tar pitch.

A series of exhaustive steaming tests made at the New River Yard of the Metropolitan Water Board, in London, England, show that these briquets have an appreciably higher calorific value than those formerly used, which were manufactured from coal-tar pitch. Under conditions of forced draft, in the furnace, the briquets "cauliflower" uniformly, thus favoring combustion; there is no tendency to soften, break down or disintegrate while burning. A. T. Shurick, Athens, Ohio, will introduce the new binder into this country.

Wood-Boring Air Drill Has Renewable Cylinders

A new-size, light-weight, reversible, pneumatic wood-boring machine, brought out by the Ingersoll-Rand Co., has cylinders which are renewable and interchangeable. This is a valuable feature, as any cylinder after long serv-



Three-Cylinder Boring Machine

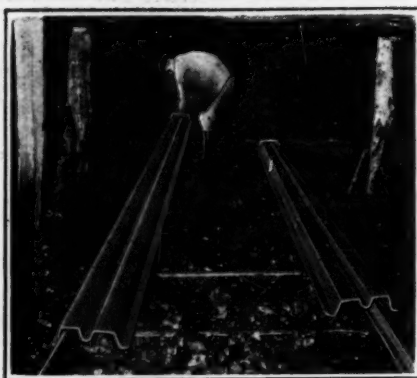
This light-weight air drill weighs only 15 lb. It is specially suited for boring wood. A 1-in. drill may be used with it.

ice, easily may be replaced and the motor made as good as new at slight cost. This new drill is known as size DD and is suitable for wood boring up to 1-in. diameter holes. The construction of this machine is similar to cylinder drills which this company manufactures.

The main features of this type machine, in addition to the special cylinders are, briefly: special three-cylinder motor; light-weight aluminum case, with steel bushings cast in position in all the bearing holes and the throttle hole and renewable crankpin sleeve.

The three-cylinder motor has its rotating parts all accurately balanced, eliminating vibration and reducing wear and tear on the machine. The drill is economical in cost of maintenance, is high powered, and, moreover, every part is readily accessible for inspection.

These drills are furnished with a spade handle and bit chuck. A breast plate or feed screw can be substituted in place of the grip handle when so desired and a drill chuck in place of the bit chuck. Thus the drill can be adapted to a wide variety of work.



Tompkins Extension Rails

These devices, especially helpful in mines using loading machines, were patented by Harold P. Tompkins of Charleston, W. Va. The ease with which each rail can be moved into place after each length of track is laid, can be appreciated from this illustration showing a man sliding a rail into position. The rail acts as a car stop when it is laid back over the end of the rail. Tompkins extension rails are distributed by the Midland Steel Products Co., of Cleveland, Ohio, and the Banks-Miller Supply Co., of Huntington, W. Va.

Obituary

Thomas D. Cassidy, 69 years of age, coal operator of Lexington, Ky., president of the Cassidy Coal Co. and vice-president of the Elkhorn Coal Co., recently died in that city after a long illness. He was a native of Flemingsburg, Ky., going to Lexington thirty years ago. A son, Tilford J. Cassidy, and his wife, survive.

Hugh Bone, first secretary-treasurer of District 14, United Mine Workers, died July 13 at the home of a daughter in Kansas City. He was 76 years old at the time of his death. He served in the Kansas House of Representatives during the Populist era. A native of Scotland, Mr. Bone came to Kansas in 1885 and was active in organizing the district union of the miners in 1892. He left the Kansas district for Kansas City five years ago.

Publications Received

Surface Machinery and Methods for Oil-Well Pumping, by H. C. George, Bureau of Mines, Washington, D. C. Bulletin 224. Pp. 148; 6 x 9 in.; illustrated.

Bituminous Coal as Generator Fuel for Large Water-Gas Sets with Waste-Heat Boilers, by Wm. A. Dunkley, Bureau of Mines, Washington, D. C. Technical Paper 335. Pp. 43; 6 x 9 in.; illustrated. Summarizes tests made of bituminous coal in water-gas sets, shows the practical efficiencies obtained and discusses phases of the process.

Electrical-Machinery Erection, by Terrell Croft. McGraw-Hill Book Co., 370 Seventh Ave., New York City. Price, \$3. Pp. 306; 5 1/2 x 8 in.; illustrated. Describes the methods and processes used in modern practice in the mechanical installation of electrical machinery.

Personal Leadership in Industry, by David R. Craig and W. W. Charters. McGraw-Hill Book Co., 370 Seventh Ave., New York City. Price, \$2.50. Pp. 245; 5 1/2 x 8 in. Gives complete and practical treatment of what the manager of men faces in getting work done.

Structure of Herrin (No. 6) Coal Seam Near Duquoin, by D. J. Fisher. Department of Registration and Education, Division of the State Geological Survey, Urbana, Ill. Report of Investigations—No. 5. Pp. 34; 6x9 in.; illustrated. Describes the results of a geologic study of the Herrin (No. 6) coal seam, including the lay or amount of dip of the coal bed and the faults, splits and other features which interrupt its continuity. The physical characteristics and modes of origin of the coal and its inclosing beds also are briefly treated.

Third Annual Report of the State Board of Registration for Engineers of West Virginia for Year Ending June 30, 1924. Pp. 59; 6x9 in.

New Companies

M. A. Pishner, Carrie Pishner and Joseph Nugnola, of Pittsburgh, Pa., contemplate the incorporation of a new coal company to be known as the **Pishner Fuel Co.** The new company plans to operate a mine. It is expected that a Pennsylvania state charter will be granted within a few weeks.

The **Federal Coal Mining Co.** was incorporated in Henryetta, Okla., early in June, with a capital stock of \$15,000, by Patrick J. O'Hara, John P. Johnson and others.

The **Warren Coal Co.** was incorporated in Birmingham, Ala., late in June by H. A. Warren, David McCarty and others.

Papers have been filed chartering the **Byesville Coal Co.**, Byesville, Ohio, with an authorized capital of \$12,500 to mine and deal in coal. Incorporators are Fred H. Peters, Alex. Ramage, Mike Novotny, H. P. Muhlbach and William Grandy.

Trade Literature

Static Condensers for Power Factor Correction. Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa. Circular 1670-Ed. 2. Pp. 20; 8 1/2 x 11 in.; illustrated. Effects of low power factor, power factor correction, selection of corrective device, theory of static condensers, chart to determine kva. required, table of sizes are some of the contents of this bulletin.

Ash and Soot Disposal at Milwaukee Sewerage Plant. Conveyors Corporation of America, Chicago, Ill. Pp. 16; 8 1/2 x 10 1/2 in.; illustrated. Tells how the ashes and soot are handled by conveyors from the stokers, combustion chambers, economizers and chimney.

Mesta Automatic Plate Valves. Mesta Machine Co., Pittsburgh, Pa. Bulletin D. Pp. 16; 7 1/2 x 10 1/2 in.; illustrated. Describes the use of these valves (Iversen patents) on all types of compressors. Charts giving temperatures of air delivered by compressors and blowing engines and showing curve for flow of gases through orifices and nozzles are included.

The **Falk Corp.**, Milwaukee, Wis., recently issued bulletin No. 38, 47 pp.; 8 1/2 x 10 1/2 in., illustrated, on its **Herringbone Gear Speed Reducers**.

Model "D" Megohmer. Herman H. Sticht & Co., 15 Park Row, New York City. Bulletin No. 130. Pp. 7; 6x9 in.; illustrated. Besides describing this instrument, instructions for its use are given.

Standardized Substations. Delta-Star Electric Co., Chicago, Ill. Bulletin No. 12. Describes new line of standardized steel tower outdoor substations intended for installation by utilities serving customers buying power from high-tension distribution lines.

Maag Gears. Niles-Bement-Pond Co., New York City. Pp. 19; 9 x 11 in.; illustrated. Circular No. 265-1. Describes the advantages and construction of these gears.

Modern Practice in Mining, by Sir R. A. S. Redmayne. Longmans, Green & Co., 55 Fifth Ave., New York City. Third Edition. Vols. I and II. Price, \$3.75 each. Vol. I covers the occurrence of coal, value and method of boring. It has 231 pp.; illustrated. Vol. II is on sinking of shafts. It has 273 pp.; illustrated. Both books are 6 x 9 in.

Our World Trade in 1924. Foreign Commerce Department, Chamber of Commerce of the United States, Washington, D. C. Seventeenth quarterly issue. Pp. 31; 6 x 9 in. Gives the value and volume of principal exports and imports between the United States and chief foreign markets.

Microscopical Structure of Anthracite, by Homer G. Turner, assistant professor of geology, Lehigh University, Bethlehem, Pa. Circular No. 2. Reprinted from the Transactions of the American Institute of Mining and Metallurgical Engineers. Pp. 21; 6 x 9 in.; illustrated.

Grinding, Pulverizing and Separating Machinery. Raymond Brothers Impact Pulverizer Co., Chicago, Ill. Catalog No. 17. Pp. 50; 8 x 11 in.; illustrated. Describes the difficulties of grinding and their solution. Plant layouts are shown covering proper arrangement for various materials.